



Mekelle University

College of Business and Economics

Department of Cooperative Studies

**A study on the Role of Multipurpose Cooperatives in Grain Marketing in
Gozamn Woreda, Amhara region, Ethiopia**

M.A. Thesis

By:

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Submitted in Partial Fulfillment of the Requirements for the Master of Arts

Degree

In

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DEDICATION

The future belongs to the organized. There fore, this document is dedicated to the growth and development of Cooperatives.

DECLARATION

This is to certify that this thesis entitled “The role of multipurpose cooperative in grain marketing in Gozamn Woreda, Amhara region, Ethiopia” submitted in partial fulfillment of the requirements for the award of the degree of M.A., in Cooperative marketing, Mekelle University, through the Department of cooperative studies, done by Muluneh Alamneh Emiru, Id.No.FDANR/PR0023/01 is an authentic work carried out by him under my guidance. The matter embodied in this project work has not been submitted earlier for award of any degree or diploma to the best of my knowledge and belief.

Name of the student: Muluneh Alamneh Emiru; Signature & date _____

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Acronyms and Abbreviations

ACE	Agricultural Cooperatives in Ethiopia
ADLI	Agriculture Development- Led Industrialization
AMC	Agricultural Marketing Corporation
ANOVA	Analysis of Variances
ARCPA	Amhara Region Cooperatives Promotion Agency
ANRS	Amhara National Regional State
BoFED	Bureau of Finance and Economic Development
CSA	Central Statistics Agency
Coop	Cooperative
DAP	Di_ Ammonia Phosphate
Derg	A military Junta that administered Ethiopia between 1974 and 1991
DPPC	Disaster Prevention and Preparedness Commission
EGZCPO	East Gojjam Zone Cooperatives Promotion Office
EGZARDD	East Gojjam Zone Agriculture and Rural Development Department
ETB	Ethiopian Birr
EPRDF	The Ethiopian Peoples Revolutionary Democratic Front, a Political Party that rule Ethiopia since 1991
EGTE	Ethiopian Grain Trading Enterprise
FCA	Federal Cooperative Agency
FDRE	Federal Democratic Republic of Ethiopia
FSS	Food Security Strategy
GDP	Gross Domestic Product
GoE	Government of Ethiopia

ICA	International Cooperatives Alliance
Masl	Meter above sea level
MT	Metric Tones
MPCs	Multipurpose Cooperatives
MoFED	Ministry of Finance and Economic Development
TLU	Tropical Livestock Unit
PASDEP	Plan for Accelerated and Sustainable Development to End Poverty
PPS	Proportionate to Size
Qt	Quintals
RUFIP	Rural Financial Intermediation Program
SACCOs	Saving and Credit Cooperatives
S.No.	Serial Number
SNNPR	Southern Nations, Nationalities and Peoples Region
SDPRP	Sustainable Development and Poverty Reduction Program
SPSS	Statistical Package for Social Sciences
Std. Deviation	Standard Deviation
USDA	United States Development Agency
WARDO	Woreda Agriculture and Rural Development Office

A study on the Role of Multipurpose Cooperatives in Grain Marketing in Gozamn Woreda, Amhara region, Ethiopia

ABSTRACT

The main purpose of this study was to evaluate the grain marketing role of multipurpose cooperatives in Gozamn woreda. It is widely accepted that multipurpose cooperatives are human associations organized for the benefits of members through collective efforts. Having recognized this, the researcher has conducted this study by focusing on the grain marketing roles and the influencing factors. To this end, data were collected from primary and secondary sources. Four primary cooperatives and 150 individuals were randomly selected in proportion to the membership size of the cooperatives. The data were collected through structured interview and focus group discussion. Both descriptive statistics and econometric analysis were employed for analytical purpose. The result shows that from the total respondents, 58.67% were not involved in marketing of teff and wheat through cooperatives while 22%, 11.33% and 8%, of the respondents sold in the ranges of : 0.5-2.00, 2.01-4.00, 4.01-6.00 quintals of teff and wheat through multipurpose cooperative respectively in 2008/09. The descriptive statistics indicated that the marketing share of cooperatives out of the total marketable surplus was 14%. Some categorical variables like, qualified employees, purchase period, and weather condition showed significant differences between groups at less than at $p < 0.05$ probability level. In the regression analysis, variables like cooperative purchase price, patronage refund, distance of the multipurpose cooperative from the house hold residence, access to market information, farming experience and access to fertilizer were found to have significant relationship to the quantity of teff and wheat sold through cooperatives. Among these significant variables cooperative purchase price, patronage refund, access to market information , farming experience and , access to fertilizer have positive relationship while distance of the multipurpose cooperative from the house hold residence has negative relationship with quantity of teff and wheat sold through multipurpose cooperatives. Based on the result, responsible organizations need to give due attention to overcome strengthen, build their capacities mainly in grain marketing management, internal control, members participation and decision making that ultimately could increase sense of ownership on the part of members and to attain the immense roles and objectives of cooperatives.

Keywords: Grain, Teff, wheat, MPCs, marketing, Gozamn Woreda

CHAPTER ONE

INTRODUCTION

1.1. Background of the Study

Grains specifically Cereals are the major agricultural food crops in Ethiopia. They are produced in larger volume compared with other crops because they are the principal staple crops. Based on Central Statistic Agency 2007/08 *meher* season report, out of the total area covered by grains, 79.69% (8.7million hectares) was covered by cereals. Teff, maize, wheat and sorghum took up 23.42% (about 2.6 million hectares), 16.12% (about 1.8 million hectares), 13.01% (1.4 million hectares) and 14.01% (1.5 million hectares) of the grain crop area, respectively. The volume of Cereals production contributed 85.11% (about 137.1 million quintals) of the grain production. Maize, wheat, *teff*¹ and sorghum made up 23.24% (37.5 million quintals), 14.36% (23.1 million quintals), 18.57% (29.9 million quintals) and 16.52% (26.6 million quintals) of the grain production in the same order (CSA, 2008).

The Federal Government of Ethiopia has adopted Agriculture Development- Led Industrialization (ADLI, 2002) with four main policy objectives that were directed to attain accelerated and sustained economic development, benefit the nations at large in various socioeconomic groups of the society, freed the country from persistent dependency on foreign aid and create well developed free market economy in the country. These policy objectives could be attained by the strategic direction through the full utilization of skilled and unskilled

¹ *Teff, or Eragrot teff, is a grain indigenous to Ethiopia and the primary staple used in the production of injera, widely consumed flat bread.*

labor, intensive utilization of land, maximum utilization of indigenous knowledge, agro-ecological based and integrated development efforts.

The agricultural marketing system of the country is known by long, shaped by geographical locations, product perishability, bulkiness, seasonality, large price and quality variations (Eleni, 2001). As a result, one of the principal objectives of ADLI is to change this market structure and conduct by well organized marketing system that could be attained through expanding and strengthening cooperatives, provision of grading and standardization of agricultural produces, provision of market information and private sector participation in the sub sector are among the most prominent ones. Consequently, farmers can gain influential power over imperfectly competitive buyers by selling their produces to cooperatives.

The spirit of self-help and co-operation has long been a part of the farming community in Ethiopia in the forms of *Debo*, *Eddir* and *Equb*. They are local level institutions. Traditional informal cooperatives would be a base for formal cooperatives. The importance of cooperatives for social and economic development has been recognized by the government of Ethiopia. Marketing cooperatives are intended to protect farmers from market uncertainties and imperfections, strengthening the bargaining power and get better prices and lower transaction costs and ensure the supply of inputs and minimize risk.

To this end, though long term structural problems that have persistently constrained cooperatives growth have not been fully eliminated, promising cooperative movements are undergoing in the country. The favorable condition created by proclamation No. 147/ 1998 has helped the co-operatives to organize and reorganize themselves voluntarily. Moreover, the new proclamation allowed primary cooperatives to organize and integrate themselves by different cooperative unions to pool their resources together and to benefit from economies of large scale operation. Based on Federal Cooperative Agency 2009 report, there were 26,128

different types of primary co-operatives in the country with 5,270,208 members and 171 different types of cooperative unions were organized in *Amhara*², Tigray, Oromiya and Southern Regions (FCA, 2009).

The Amhara National Regional State has given due emphasis for the organization and development of cooperative in every rural and urban areas of the region. As a result, there are 5,212 different types of primary cooperative societies and 52 secondary cooperative unions in the region in 2008. These cooperatives have a total membership of 2,167,572 which includes 270,946 (12.5 %) female members and total capital of Birr 207,942,194 (ARCPA, 2008).

Cooperatives of the country are hindered by several bottlenecks in their role performance and business operations. Therefore cooperatives are advised to be willing to consider changes to reexamine their traditional role of service orientation. In the meantime, all stakeholders should strengthen cooperatives and overcome problems related to their business operations. Therefore, time requires a new mind set, quality cooperative leadership and integrated supports by stakeholders to ensure sustainability through attainment of multiple objectives of cooperatives.

² *Amhara National Regional State is one of the regional states in the federal democratic republic of Ethiopia located in the North West parts Ethiopia. It is also the second populous region in the country.*

1.2 Statement of the problem

The Ethiopian grain market, like many agricultural markets in the developing world, operates in a constrained environment lacking a system of information, grain standardization and certification services, efficient transport, and effective legal mechanisms to enforce contracts. A particular feature of the Ethiopian grain market is that the pattern of grain trade follows a radial structure with grain flowing into a single central market from outlying surplus production areas and flowing out from the central market to deficit areas in other regions of the country (Gebremeskel *et.al*, 1998).

In light of the GoE's strategies for rural development and economic growth, smallholder commercialization is a topic that has received extensive attention in recent years. Though there have been attempts made by the government to improve performance cooperatives, they are still hindered by several bottlenecks like low level of members participation, low level of institutional capacity, absence of qualified employees, lack of capital, lack of up-to-date market information, weak and disintegrated support and corruption. As a result farmers were not in a position to make the maximum benefit from their efforts through cooperatives (Tanguy *et.al*. 2008).

Farmers of the woreda under study are the producers of teff, wheat, sorghum, barley, peas, beans and others mainly once a year following the main rainy season calendar of June to August and harvest after December. Based on the 2008/09 Woreda Agricultural and Rural Development Office production year report, farmers of the Woreda produced 1,333,595 quintals of different types of grain. As to CSA (2003) report, an estimated 166,669 (12.5 %) quintal of grain is assumed to be marketable surplus marketed through different channels in the given year.

There are nine multipurpose cooperatives (MPCs) organized and registered under the cooperative proclamation 147/98 in the woreda. These MPCs are desired to carry out the grain marketing function as their major objectives of protecting farmers from any market failures with related marketing of members produces at harvest season. Nevertheless, the 2008/09 production year volume of grain transacted through MPCs in this Woreda were about 3018 (< 2%) quintals from the total marketable surplus of different grain types and marketed through different channels. This is not more than 13 kilo gram per capita supply of grain from every member to their cooperative in this year.

To the knowledge of the researcher, there is lack of studies on the role of multipurpose cooperatives in grain marketing in the study area. Hence, this study is intended to evaluate the role of multipurpose cooperatives in grain marketing in Gozamn Woreda of Amhara region.

1.3 Purpose of the study

Evaluating the role of multipurpose cooperative in grain marketing, economic and social contributions of cooperative at micro level is main task of this thesis. The analysis of cooperatives' role at regional and national level critically depends on response parameters from individual farmer members and cooperative societies. Thus, the purpose of this study is to contribute to the analysis and study of the role of cooperatives at woreda and regional level. Moreover, it will help as an input for researchers who want to engage in further study and address the needs and problems of the cooperative societies and members.

1.4 Objectives of the study

1.4.1 General objective

The general objective of this study is to evaluate the grain marketing role of multipurpose cooperatives in marketing of member's marketable grain, in particular teff and wheat in Gozamn Woreda, Amhara region, Ethiopia.

1.4.2 Specific objectives

1. To assess the role of grain marketing by multipurpose cooperatives in the study area.
2. To identify marketing actors and their roles in grain marketing in the study area.
3. To analyze factors influencing member's grain sales volume through the MPCs.
4. To devise strategies for the improvement of grain marketing performance of MPCs.

1.5 Hypothesis of the study

Hypotheses have been framed to indicate the direction in which the researcher study should proceed. In line with objectives, the following propositions have been hypothesized.

- ✓ There is no significant relationship between access to fertilizer, and quantity of teff and wheat sold through MPCs.
- ✓ There is no significant relationship between level of education and member's sale volume of teff and wheat sold through cooperatives in the study area.

1.6 Research Questions

This study attempts to answer the following basic research questions:

1. Who are the grain marketing actors in the study woreda?
2. What were the major factors affecting the quantity of grain sold through MPCs?
3. To what extent do the member farmers sell their grain surplus through cooperatives?

1.7 Scope and Limitation of the Study

The study is constrained both in area and time. All the primary cooperatives involved in grain marketing activity and all types of grain marketed through cooperatives in the study area were not covered due to the limit of resource (time and money). Only **teff** and **wheat** were considered in four selected multipurpose primary cooperatives which were randomly selected from Gozamn woreda. Even though the study represents the conditions in which cooperatives are working, the results cannot be generalized to the whole part of Amhara and Ethiopia.

1.8 Chapter Scheme

This thesis constitutes five chapters. In the introduction chapter, the subchapters that are discussed includes background, statement of the problem, research questions, objectives of the study, hypotheses, scope and limitations of the study and purpose of the study. The second chapter elaborates a review of some theoretical concepts and empirical studies with respect to the cooperatives. A brief description of the study area and a thorough explanation of the methodologies used for the study are presented in chapter three. In the fourth chapter, the results obtained from the analysis of descriptive statistics and econometrics model are analyzed, interpreted and discussed. Finally, chapter five presents conclusion and recommendation based on the results of the study.

CHAPTER TWO

LITERATURE REVIEW

In this chapter, the literatures related to the concepts and empirical studies on cooperatives and grain marketing are presented.

2.1 Concept of Cooperation

Cooperation among people is an inherent element of many cultures that existed for many decades in various urban and rural communities. The gradual transformation of such cooperation enabled the formation of cooperatives as institutions that allow people to systematically pool resources in order to achieve a defined set of goals (Develtere *et. al*, 2008).

2.2 Cooperative Origins

It is believed that the birth place of modern cooperatives was Britain at the end of the eighteenth century. Friendly societies emerged in Britain among working class groups wanting to protect themselves against life's hazards through mutual insurance, numbering over a million by 1834. They were seen as a self-help movement, being a response to the insecurities of reliance on wage labor arising with the industrial revolution. Building societies provided a fund through which members could save towards the cost of building a house. Legislation in 1834 enabled societies to engage in any activities 'not contrary to law', meaning early manufacturing and retailing societies could also register as a special category of industrial and provident society (Meade *et.al*, 2005). According to Meade *et.al* (2005), other cooperatives for example housing cooperatives flourished in Norway and Sweden,

cooperative banks and mutual insurers in Germany and agricultural cooperatives in Denmark have flourished later on.

2.3 Definition of Cooperatives

There are many cooperative definitions and there is no consensus on any particular definition. Cooperatives are a different approach to reaching a common goal. Members work together to achieve goals that they would not be able to achieve separately. Some of the differences of cooperatives and other enterprises are depend on their overall purpose, how they operate, their governance, and how they are controlled. These differences become apparent when attempting to define a cooperative. Any definition of a cooperative requires two key ingredients: it must be broadly applicable and yet sufficiently concise to be easily understood and remembered by the typical cooperative member (Develtere et. al, 2008).

The ICA, for example, defines a cooperative as “An autonomous association of persons united voluntarily to meet their common economic, social, and cultural needs and aspirations through a jointly-owned and democratically-controlled enterprise.” Cooperative leaders and non-governmental organization around the world recognize the ICA cooperative definition and values. The ICA definition recognizes the essential elements of cooperatives; membership is voluntarily, coercion (force) is the antithesis (contrast) of co-operation. Persons compelled to act contrary to their wishes are not truly cooperating. True cooperation with others arises from a belief in mutual help; it can’t be dictated in genuine cooperatives, persons join voluntarily and have the freedom to give up the cooperative at any time.

The US Department of Agriculture (USDA, 2002) defines a cooperative as “A cooperative is a user-owned, user-controlled business that distributes benefits on the basis of use.” This definition captures the three most important cooperative principles such as user ownership, user control, and proportional distribution of benefits.

2.4 Concepts related to cooperative marketing

Role: The position or purpose that some one or some thing has in a situation, organization, society or relationship (Cambridge dictionary, 2003).

The researcher has taken some of the following concepts from Kotler & Armstrong (2006):

Market: The set of actual and potential buyers of a product or service

Marketing: The process by which companies create value for customers and build strong customer relationship in order to capture values from customers in return

Marketing Management: The art and science of choosing target market and building profitable relationship with them

Marketing Mix

Product: The product variable is the aspect of the marketing mix that deals with researching consumers' wants and designing a product with the desired characteristics

Place/distribution: To make products available in the quantities desired to as many customers as possible and to keep the total inventory, transport and storage costs as low as possible the place/distribution variable.

Promotion: The promotion variable relates to activities used to inform one or more groups of people about an organization and its products

Price: The price variable refers to establishing pricing policies and determining product prices

People: The people variable controls the marketing mix; facilitates the product's distribution, sale and service; and as consumers or buyers gives marketing its rationale.

Multipurpose Cooperative Societies: Multipurpose cooperatives unlike single purpose cooperatives undertake diversified activities. Multipurpose cooperatives, function on the basis of a fully integrated framework of activities, planned according to member's requirements identified at the grass root level, taking the socio-economic life of the farmer members in its totality.

Marketable surplus: the volume of grain produced and being at the hands of producer but ready as marketable surplus to be sold through different marketing agents.

Marketed surplus: the volume of grain sold by the producer to different grain marketing channels and available on the hands of these marketing agents.

Marketing margin: the marketing margin, characterized as some function of the difference between retail and farm price of a given farm product.

Market Information: is defined as any written, printed, audiovisual, or graphic information, including advertising, pamphlets, flyers, catalogues, posters, and signs, distributed among beneficiaries or to the entire community.

2.5 Cooperative Values and Principles

2.5.1 Values

Cooperatives are based on the values of self-help, self-responsibility, democracy, equality, equity and solidarity. In the tradition of their founders, cooperative members believe in the ethical values of honesty, openness, social responsibility, and caring for others.

2.5.2 Principles

2.5.2.1 Rochdale Principles

The Rochdale Equitable Pioneers' Society was organized in England in 1844 by 28 weavers working in the cotton mills in the English town of Rochdale. Unable to afford food and household goods due to low wages and poor working conditions, they sought to achieve better buying prices for flour, oatmeal, sugar and butter by pooling their buying power. While not the first cooperative, the Rockdale Society is credited as popularizing the modern cooperative model by spreading its cooperative principles, summarized by Kimberly Zeuli and Cropp (1980) as: open membership; one-member-one-vote; cash trading; membership education; political and religious neutrality; no unusual risk assumption; limitation on the number of shares owned; limited interest on investment; goods sold at regular retail prices; and net margins distributed according to patronage, equity is provided by members, equity in membership (no discrimination by gender).

2.5.2.2 ICA Principles

The International Cooperative Alliance (ICA) is the world's largest non-government organization, formed in 1895 to represent cooperatives internationally. In the spirit of the "Rochdale Pioneers", the ICA adopted the following seven cooperative principles (1995:1)

Voluntary and Open Membership: Cooperatives are voluntary organizations, open to all persons able to use their services and willing to accept the responsibilities to membership, without gender, social and political or religious discrimination.

Democratic Member Control: Cooperatives are democratic organizations controlled by their members, who actively participate in setting their policies and making decisions. Men and women serving as elected representatives are accountable to the membership. In primary

cooperatives members have equal voting rights (one member, one vote), and cooperatives at other levels are also organized in a democratic manner.

Member Economic Participation: Members contribute equitably to and democratically control the capital of their cooperative. At least part of the assets is usually the common property of the cooperative. Members usually receive limited compensation, if any, on capital subscribed as a condition of membership. Members allocate surpluses for any or all of the following purposes: developing the cooperative, possibly by setting up reserves part of which at least would be indivisible; benefiting members in proportion to their transactions with the cooperative; and supporting other activities approved by the membership.

Autonomy and Independence: Cooperatives are autonomous, self-help organizations controlled by their members. If they make agreements with other organizations, including governments, or raise capital from external sources, they do so on terms that ensure democratic control by their members and maintain their cooperative autonomy.

Education, Training and Information: Cooperatives provide education and training for their members, elected representatives, managers and employees so that they can contribute effectively to the development of their cooperatives. They inform the general public particularly young people and opinion leaders about the nature and benefits of cooperation.

Cooperation among Cooperatives: Cooperatives serve their members most effectively and strengthen the cooperative movement by working together through local, national, regional and international structures.

Concern for Community: Cooperatives work for the sustainable development of their communities through policies approved by their members.

2.5.2.3 US Principles

The three basic cooperative principles that have been incorporated in US government regulations, and federal and state tax codes are similar to some of the Rochdale and ICA principles, they are user-ownership, user-benefit, and, user-control.

a) *The user-ownership*: This principle implies that the people who use the cooperative must finance the cooperative and, therefore, own the cooperative. Members are responsible for providing at least some of the cooperatives' capital. The equity capital contribution of each member should be in equal proportion to that member's use (patronage) of the cooperative. This shared financing creates joint ownership, which is part of the ICA cooperative definition.

b) *The user-control*: means that members of cooperatives govern the business directly by voting on significant and long-term business decisions and indirectly through their representatives on the board of directors. Cooperative statutes and bylaws usually dictate that only active cooperative members (those who use the cooperative) can become voting directors although non-members some times serve on boards in a non voting, advisory capacity. Democratic control is maintained by voting rights to patronage. Equitable voting rights, or democratic controls (as written in the ICA definition), are a hallmark of cooperative.

c) *Distribution of benefits on the basis of use*: under this principle members should share the benefits, costs, and risks of doing business in equal proportion to their patronage. The proportional basis is fair, easily explained and entirely feasible from an operational standpoint. To do otherwise distorts the individual contributions of members and diminishes their incentives to join and patronize the cooperative. Cooperative benefits may include better prices for goods and services, improved services, and dependable sources of inputs and markets for outputs. Most cooperatives also realize annual net profits, all or part of which are returned to members in aptly called patronage refunds.

2.6 Cooperative movement in Ethiopia

The people of Ethiopia have got a very long social history of working together to fulfill their socio-economic needs. Traditional cooperatives associations existed and still exist in Ethiopian society in the form of *Equb*, *Edir* and *Debo*.

***Equb*:** It is credit association focusing on the mobilization of money at equal amount and for equal benefits in a limited member of the community. It also promotes saving habit among members and provides credit to members.

***Edir*:** It is an association for mutual help and burial. It is established by the mutual agreement of community members to collaborate each other whenever any member or their family members face adverse situations.

***Debo*:** It is the most popular form of community organization which refers to mutual support in farming and house building activities through out the year.

The history of formal cooperatives in Ethiopia dates back to 1960, when the first cooperatives' directive was enacted. Since then, the cooperatives proclamations have been improved and four new proclamations and an amendment act have been enacted between 1960 and 2007: Directive No.44/1960, Proclamation No.241/1966, Proclamation No.138/1978, Proclamation No. 85/1995, and Proclamation No.147/1998, and Amendment Act No. 402/2004. This latest proclamation ensures that cooperative policy is fully consistent with the Universal Cooperative Principles and the ILO Promotion of Cooperatives Recommendation 2002 (Bezabih, 2009). Aside from enacting cooperatives proclamations, Ethiopia has formulated a five year cooperative development program. This demonstrates that the government has fully realized the contribution of cooperatives to economic and social development, food security and poverty reduction in Ethiopia.

A rapidly expanding cooperative movement

The policies and strategies developed for the promotion of the cooperatives enable the realization of government poverty reduction program. For instance, PASDEP (2002) planned to increase the number of beneficiaries receiving services from cooperatives from 30% in 2004/05 to 70% in 2009/10. It is aimed at increasing the number of primary cooperatives to 24,677 and the number of cooperative unions to 646. The government institutions create links with international organizations to support cooperative development. A typical example come from the Rural Finance Intermediation Program (RUFIP), which was designed by the Federal Cooperative Agency and funded by the African Development Bank, to build the capacity of cooperatives involved in rural financial services.

The Federal Cooperative Agency (FCA) is the highest government structure for cooperative promotion and control in Ethiopia. FCA has the mandate of overseeing the appropriate implementation of legislation for cooperatives, designing cooperative policies and legal procedures consistent with the international conventions on cooperatives and ensuring policy coherence between cooperative policy and the broader policy environment. At the regional level, cooperative promotion structures are found at the zonal, woreda, and *kebele*³ levels. The regional cooperative promotion institution is organized as agency in Amhara Regional State. This regional cooperative institution is autonomous in its operations to organize, register and support primary cooperatives by locality. Consequently, 26,128 primary cooperatives have 5,270,208 members of which 4,470,081 are males and 800,127 (17.8%) are females with an owned capital of Birr 1,003,470,660 (FCA, 2009) (*Appendix table 5*). This performance shows how the desired objective by PASDEP(2002) was fulfilled with related to the

³ *Kebelle* is the lower level of government administration in Amhara region.

establishment of primary cooperatives .These cooperatives are engaged in 36 different types of activities such as grain marketing, coffee marketing, saving and credit services, vegetables and fruits production and marketing, dairy production and marketing, livestock marketing. Agricultural multipurpose cooperatives dominate the list of primary cooperatives (25.7 %) followed by saving and credit cooperatives (24.5 %) which is organized both in the rural and urban areas.

Cooperative unions are a recent phenomenon in the history of Ethiopian cooperatives. Due to a favorable policy environment, primary cooperatives of common interest have formed cooperative unions. The Lume Adama Grain Farmers' Cooperatives Union was the foremost cooperative union, established in 1997, to increase farmers' bargaining power in selling their marketable grain. In view of this fact, several unions have been established in Ethiopia.

According to the Federal Cooperative Agency (2009) data, there are 171 different types of cooperative unions in the country with affiliated members of 3,706 and registered capital of birr 161,968,596 of which the multipurpose farmers' cooperative union has the highest share 40.35% (FCA, 2009) (*Appendix table 6*).

In the year 2009, the total number of primary cooperatives represented by unions was 3,706, making the number of primary cooperatives represented by unions 14.18%. There is a difference in the distribution of cooperative unions among regions in Ethiopia. Oromiya, Amhara and SNNP account 38.5%, 24.5%, and 18.7% respectively. Cooperative unions are actively involved in economic activities through importation and distribution of agricultural inputs such as fertilizers and chemicals; exportation of agricultural commodities such as coffee, oilseeds, and pulse, among others; and marketing of agricultural products to their members and other government and private institutions, provision of consumer articles in reasonable prices to members and non members.

The government has realized the importance of establishing cooperative federations and is providing technical and other supports through the regional cooperative promotion agencies. The Southern Region Farmers Cooperatives Federation was established in the Southern Nations, Nationalities and Peoples Region (SNNPR) in February 2008 and now provides as an apex cooperative body for the region. The FCA underlines establishing a total of 17 different types of cooperatives federations at the national level over the next five years (*Appendix table 10*). Among the planned federations grain and input marketing farmers' cooperative federation; coffee farmers' cooperatives federation; dairy and dairy products marketing cooperatives federation and vegetables and horticultural products farmers' cooperatives federation are the most prominent types of federations.

2.7 Cooperative movement in Amhara Region

Similar to other national regional states of Ethiopia, ANRS has various ancient self-help organizations, which can provide social and economic benefits to their members. *Edir*, *Equb* and *Wonfel* are the most common types of traditional form of association in the long last social history of the people. The modern form of cooperative organization has flourished after the Derge seized its power in 1974 and Proclamation No. 138/ 1978 has enacted. Cooperative societies largely producers cooperatives, for example *Yetnora*⁴ *producers cooperative*, were famous enough in mobilizing the entire population in the *Yetnora kebelles* (in Dejen Woreda) and farmers service cooperatives were organized in some parts of the region. Nevertheless, none of the producers cooperatives were able to survive after the Derge announced the mixed economic reform of the socialist economy that also allowed members of the cooperatives to organize on voluntary basis. However, freedom to organize and to form business institution

⁴ *Yetnora* is a rural *kebele* located in East Gojjam Zone of Amhara Region in the Addis Ababa-Bahirdar road (235km) in *Dejen woreda*.

like cooperatives on voluntarily basis was realized after the EPRDF has come to power in 1991 and The Transitional Governments of Ethiopia declared proclamation 85/1994. The regional government believes that organizing of farmers cooperative is the key elements of rural development and should be given due emphasis. The Regional Cooperative Promotion Agency is the regional institution responsible for assisting the people in organizing and managing agricultural cooperatives. According to the report of this agency (2008), there are 5,212 different types of primary cooperatives with a total number of members 2,167,572 of which 270,946 (12.5 %) are females and 68 % of the regional households become members of different types of cooperatives in the region. There are also 52 secondary level unions, and all the cooperatives have total capital of Birr 207,948,194 participating in the economic development efforts of the region. This data also shows that 42 cooperative unions have bought and sold 184,036 quintals of grains and 1,555,836 quintals of fertilizer in 2008.

2.8 Empirical studies

2.8.1 Grain production and Marketing in Ethiopia

Grain marketing was heavily controlled by the socialist military government that ruled the country during 1974–90. The Socialist Military Government was directly involved in wholesale and retail grain trade, essentially suppressing private grain marketing. Farmers were forced to sell certain parts of their grain produce (usually 10–50%) to the then government grain trade known as the Agricultural Marketing Corporation (AMC), at fixed prices which were 2–3 times below the prevailing market prices. Interregional private trade was also severely restricted. The heavy government involvement and restrictions in grain trade during 1974–91 had adversely affected producer incentives, farm technology uptake and productivity (Eleni, 2001).

In 1991 grain trade was liberalized, official pricing was deserted, trade restrictions were lifted and private grain trade expanded. Upon grain trade liberalization, the reform resulted in reduced marketing margins, better market integration and entry by private traders (Negassa and Jayne, 1997; Gabre-Madhin et. al, 2003). As a result, about 95% of cereal marketed by smallholders in Ethiopia was handled by private traders (Eleni, 2001).

Imperfections in the grain marketing system result in several consequent outcomes. Surplus grain producing areas in Ethiopia are localized, implying the critical role of transportation to different and distant deficit areas. The size and topography of the country, limited transportation possibilities (road transport is the only available means for grain transportation), and the radial configuration of transport networks with Addis Ababa at the centre has hampered inter-regional grain flows. As a result, localized shortage of food supply exists due to poor marketing and distribution networks, high transport cost, and related infrastructural problems that isolate surplus production areas from outside sources of effective demand even during good harvest seasons. Sometimes, surplus production results in sharp drop in prices. On the other hand, the study conducted by Berhanu and Hoekstra (2008) in the five districts of Alaba and Dale (Southern Region), Ada'a-Liben (Oromia Region), Fogera (Amhara Region), and Atsbi-Wonberta (Tigray Region) shown that grain production in Ethiopia can be classified into the main rain production season takes place during June–December and the small rain production season takes place during March–June. Wheat, maize, barley and teff are the cereal crops grown during the main rain season, while haricot beans, lentils and chickpea are the pulse crops grown during the short rain season. When measured in terms of contributions to total cereal production, maize, wheat, teff, sorghum and barley are the most important traded agricultural produces in Ethiopia. Nationally the proportion of maize, wheat and teff sold by smallholders was about 30, 31 and 28% of production, respectively (Lirenso 1993, cited in Gebremedhin, 2008).

Teff has become an important market-oriented crop in Ethiopia. In the study areas, about 77% of households produce the crop under 31% of the total cultivated area. About 60% of teff produce was sold although there were significant variations across the study areas. On average about 540 kg of teff per household was sold, with a monetary value of about ETB 1417 (USD 170.00). Wheat was also an important market-oriented commodity in the study areas. On average, wheat is produced by 64% of the households on about 27% of total cultivated area. On average about 1.4 hectares of land is allocated for wheat by a household and 47% of wheat produce was sold. A household sold about 600 kg of wheat for a sales value of about ETB 978. Wholesalers and retailers were the main market actors in teff and wheat marketing about 65%, 51% of producers of teff and wheat sold were through wholesalers and retailers respectively, while only 2% and 6% of the produces of teff and wheat were sold directly to consumers respectively (Gebremedhin and Hoekstra, 2008). In Ethiopia, teff and wheat production covered 27.6% & 15.3% the total cultivated area and 21.14% & 16.3% of the total volume of production respectively CSA (2007/08).

Table 1: Major crop production for private landholdings for meher season (2007/08, 2000EC)

Grains	No. of holders		Area in hectare		Production in quintal	
	Ethiopia	Amhara	Ethiopia	Amhara	Ethiopia	Amhara
Noug	1,022,900	512,625	285,236	121,659	1,598,197	675,026
Field peas	1,447,464	609,287	211,798	81,407	2,319,343	856,551
Faba beans	3,597,229	1,441,807	520,519	241,129	6,886,670	319,183
Barley	3,818,358	1,332,862	984,942	330,278	13,548,070	4,299,377
Wheat	4,129,358	1,413,420	1,424,719	426,814	23,144,885	6,211,768
Sorghum	4,264,205	1,039,875	1,533,537	499,133	26,591,292	7,907,746
Teff	5,850,536	2,209,574	2,565,155	1,047,084	29,929,234	12,685,684
Maize	7,492,800	2,022,980	1,767,388	397,481	37,497,490	9,212,313
Total	3,1622,850	10,582,430 (33%)	9,293,294	3,144,985(33%)	141,515,181	42,167,648 (29%)

Source: Agricultural Sample Survey, CSA (2007 / 08, 2000 EC)

2.8.2 An Overview of Agricultural Co-operation throughout the World

The study conducted by Ginette *et.al* (1996) on agricultural co-operation throughout the world (the case of 47 countries) estimated that the total number of cooperative was 331,165 with annual turnover of more than \$US 180,342,479 million across the world. It is estimated that 250 million farmers in developing countries participate in agricultural cooperatives. Among the better known producer organizations are the Indian Dairy Cooperatives Network and the National Federation of Coffee Growers of Colombia (Francesconi, 2009).

Table 2: Picture of the world situation (for the 47 countries surveyed)

Continent	Number of Members of coops	Number of cooperatives	Turnover (\$US million)
Europe	19,288,023	53,315	215,616
Asia	148,403,784	243,375	121,032
Americas	6,001,492	12,249	104,491
Africa	6,649,180	22,226	8,557
TOTAL	180,342,479	331,165	449,696

Source: Review of International Co-operation, 1996

Europe: The European agricultural co-operatives occupy an important place in the dairy and meat industries, in terms of both turnover and market share. Dairy-product processing and marketing activities account for more than 30% of the total turnover of the agricultural co-operatives in Germany, the Netherlands, Denmark, Finland, and Norway. Market shares are often over 90% - this is true for Denmark, Sweden, Finland and Norway. In Denmark, two co-operatives namely MD Foods and KloverMaelk, alone control 80% of the country's dairy production (Ginette et.al, 1996).

Asia: Asia has in fact the second largest agricultural co-operative turnover by continents. This is mainly because of the volume of turnover of the Japanese agricultural co-operatives, which head the ranking by country with a turnover of nearly \$US 90,000 million. The complexity of

the co-operative systems in Asia is shown particularly clearly in the country data sheets on Japan, the Republic of Korea and India (Ginette et.al, 1996).

In Japan, for example, one of the aims of the basic multi-purpose co-operatives is to improve the living conditions of farmers by action in the areas of consumption, health (the agricultural co-operatives own a hundred or so hospitals) and leisure activities. They, thus, play an important role in the rural communities. They are active in specific sectors marketing of fruit and vegetables, livestock and meat products, sericulture (Ginette, et.al. 1996). In India, on the other hand, the agricultural co-operatives are structured by sector of activity (marketing, supply) and by product although at the local level there are co-operatives that assume a varied role (credit, supply, storage). The Indian co-operatives are tending to evolve towards specialized processing and marketing activities, which currently make a major contribution to the turnover of India's agricultural coops. Three dominating sectors are sugar cane and sugar-cane processing; cereals and jute production; cotton, including yarn and the dairy co-operatives are growing cooperatives (Ginette et.al, 1996).

The America: The United States agricultural cooperatives alone accounts for 80% of the total world turnover, followed by Brazil and Canada. On a world-wide scale, the volume of business handled by the United States agricultural cooperatives is often impressive. In the livestock sector, for example, with a turnover of \$US 5,500 million dollars, or 6% of the total turnover of the United States agricultural co-operatives, the US co-operatives lie second on the world scale. In the Americas, the agricultural co-operatives are active mainly in the processing and marketing of agricultural products. This is clearly the situation in the United States and Canada, where the co-operatives account for nearly 75% of total turnover. But this is also the case in Brazil and Colombia, where the modernization of the agricultural co-operatives seems to have been accompanied by a specialization in processing and marketing

activities. The agricultural sectors where the co-operatives dominate in those four countries are cereals and dairy products although the strength of their positions on the markets varies within countries. In Canada, for example, despite a strong presence of the co-operatives on the cereals and oilseeds markets, there has been a fall in their market share in this sector, while their market share was rising by 51-60% in the dairy products sector between 1977 and 1992 (Ginette et.al, 1996).

Africa: The current African picture is built up from data from eight countries: South Africa, Egypt, Ethiopia, Morocco, Namibia, Uganda, Senegal and Zambia. In Egypt, village-level co-operatives were traditionally multi-purpose co-operatives undertaking activities such as agricultural input supply services, credit, access to machinery, marketing services, training, and even rural development. Single-purpose co-operatives, which began to emerge in 1977 and specialize in the processing and marketing of vegetable products (cotton, cereals, groundnuts, fruit and vegetables), among other things, are tending nowadays to take the place of the multi- purpose co-operatives (Ginette et.al, 1996). In Morocco, there are three types of co-operative: land reform co-operatives, cereal co-operatives (closely controlled by the State) and non land reform co-operatives formed by voluntary groupings of agricultural producers. The latter specialize in a limited number of sectors of activity (meat packaging, milk collection, processing, and export). In Uganda, the agricultural co-operatives which were first created at the beginning of the century by farmers with the aim of handling cash-crop marketing activities (coffee, cotton, tobacco, tea) are still strongly specialized in this sector. This positioning could perhaps, shows that there was a fall in the turnover of the Ugandan agricultural co-operatives because we know how vulnerable these crops generally are to fluctuations in their prices on international markets (Ginette *et.al*, 1996).

Table 3: Africa - Countries ranked by turnover (1994)

Country (year)	Number of Members	Number of co-operatives	Turnover (\$US Million)
South Africa (1994)	196,000	258	6,913
Egypt (1994)	4,250,000	6,542	1,528
Namibia (1994)	8,109	25	124
Senegal (1994)	800,000	4,500	2
Uganda (1994)	898,944	4,381	N/A
Zambia (1994)	340,482	1,375	N/A
Morocco (1993)	155,645	2,024	N/A
Ethiopia (1994)	N/A	3,121	N/A
TOTAL	6,649,180	22,226	8,557

Note: N/A (data Not Available)

Source: Review of International Co-operation, 1996

The Zambian co-operatives, which have developed particularly since independence, are engaged in production activities, the processing and marketing of agricultural products, and also in the supply of inputs. Nowadays, they are showing a tendency to open themselves to areas of activity outside agriculture and consequently seem to be playing significant role in stimulating entrepreneurship in rural areas (Ginette et.al, 1996).

An important feature of New Zealand's agricultural co-operatives is vertical integration of their activities in mainly export industries, particularly the dairy and meat industries. Their presence is not very significant, however, in wool and wood processing and marketing, while the producers in these industries have formed a number of large service and supply co-operatives (Ginette et.al, 1996).

2.8.3 Agricultural cooperatives in Ethiopia

An evaluation report of USAID/Ethiopia (ACE program, 2005) revealed that by 2004, the volume of coffee marketed through cooperative unions was increased by more than 180% from the previous year's volume and reached nearly 7,500 MT, which brought an income of

over \$15 million for cooperatives. Two thirds of the coffee volume came from SNNPR and less than one third from Oromiya. The volume of grain marketed through cooperatives also increased from 10,816 MT in 2003 to 17,525 MT in 2004, due to linkages developed with agro-processors and sales arranged with food security programs. Cooperative unions sold over 5,700 MT of improved seed of which 88% in Oromiya, 10% in Amhara, and a minimal amount in SNNPR. The value of seed sales exceeded \$1.5 million. However, no seed was sold in Tigray where commercial grain production is minimal.

Table 4: Volume and Value of Grain Marketed through Cooperatives (2005)

Regions	Marketed outputs							
	Cereals		oil seed		pulses		total	
	volume	Value (MT)	Volume (MT))	Value (Birr)	Volume (MT)	Value (Birr)	Volume (MT)	Value (Birr)
Amhara	3,582	5,574,826	1,386	3,995,599	343	749,466	5,311	10,319,891
Tigray	235	284,633	-	-	-	-	235	284,633
SNNPR	4,072	6,687,845	-	-	-	-	4,072	6,687,845
Oromiya	5,931	10,500,801	1,226	4,352,607	647	1,084,545	7,804	15,937,953
Total	13,820	23,048,105	2,612	8,348,206	990	1,834,011	17,422	33,230,322

Source: ACE Annual Report, 2005

2.8.4 Challenges and Constraints of Grain marketing in Ethiopia

In the face of imperfect markets and high transaction costs, many farmers were unable to exploit the potential of gains from commercialization. In the absence of mechanisms to overcome these constraints, smallholders are unlikely to participate in .These challenges are particularly important in Sub-Saharan Africa where empirical evidence suggests that the proportion of farmers engaged in subsistence agriculture remains very high (Eleni et.al, 2007).

Absence of Control on Un-licensed Merchants: Although the law requires merchants to acquire a license from the appropriate authorities in order to engage in grain trading, licensed traders claim that this is not well enforced; illegal traders were participating in grain trading (Jayne *et. al*, 1998).

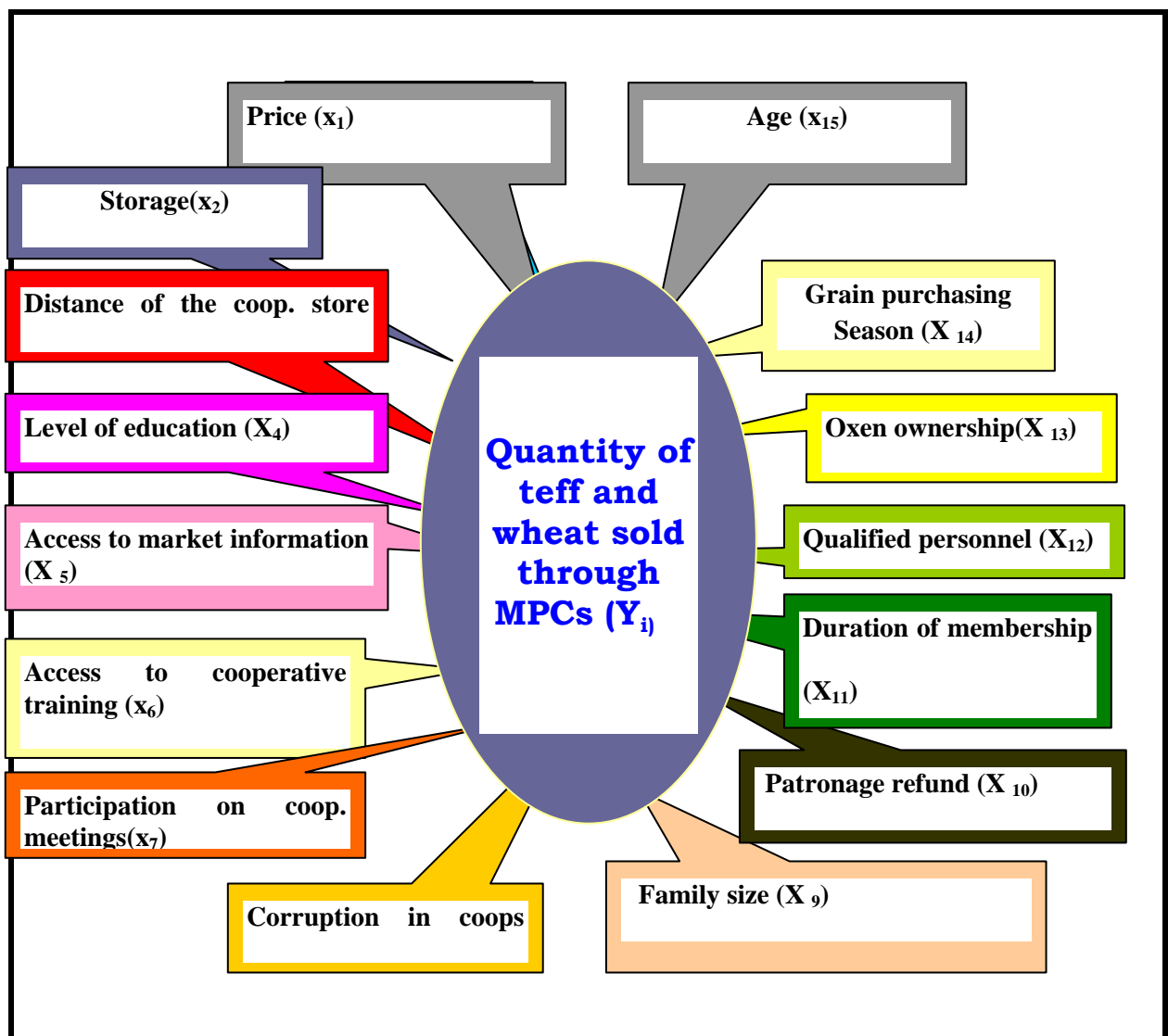
Low level of transportation Services: Timely and speedy flow of grain from producing to consuming areas is essential for an efficient marketing system. The present slow movement of grain could have contributed a lot to market inefficiency and substantial interregional price variations. In addition to the delay in obtaining transport service, weight loss is also common in transporting grain; 83% of the merchants interviewed reported that they experience weight loss ranging from 0.1% to 16%. The mean loss reported was about 2.18 % (Eleni, 2001).

The Inadequacy of Current Market Information: Currently, both private and public sector decision makers in Ethiopia face inadequate access to grain market information. There were no systems of generating and disseminating market information which can provide timely knowledge about a broader variety of markets, at less cost, and to a greater number of market participants. Government and donor agency decision makers also face inadequate access to timely, accurate grain market information, limited access to finance and storage facilities, lack of processing linkages , high marketing costs remain fundamental (Jayne *et.al*, 1997).

2.9 Conceptual Framework

The conceptual frame work of the study provides information about the relationship of the quantity of grain (teff and wheat) sold through multipurpose cooperatives by cooperative members and factors influencing the volume of sales. The relationship of dependent and independent variables may have either positive or negative relationship.

Figure1: conceptual frame work of the study



Source: Own data, 2010

CHAPTER THREE

MATERIALS AND METHODS

The methods and materials developed for the study is presented in this chapter.

3.1 Description of the Research Site

3.1.1 An overview of Amhara National Regional State

The Amhara National Regional State (ANRS) is one of the nine regional states of the Federal Democratic Republic of Ethiopia (FDRE). In geographic terms, the ANRS is located between 9° 21' to 14° 0' North latitude and 36° 20' and 40° 20' East longitude. The total area of the region is estimated to be 170,752 square kilometers. It shares borders with Tigray in the North, Afar and Oromia in the East, Oromia in the South, and Benishangul Gumuz and The Sudan Republic in the West. The region is divided into 10 administrative zones (Girma et.al, 2005).

The Amhara Region has human population of 17.21 million of which 8.63 million (50.2 %) are males and 8.57 million (49.8 %) are females (CSA, 2007). As to this report, the population size can be projected with the annual growth rate of 1.7 %, and nearly 87.4% of the population lives in the rural areas depending mainly on agriculture and related activities. According to the Sustainable Development and Poverty Reduction Program (SDPRP, 2002), the regional head count index (number of people living below the absolute poverty line) is estimated to be 54% due to the low return from agriculture, unreliable rainfall, prevalence of pests and diseases, scarcity of farmland, soil erosion and degradation, lack of improved technologies, lack of supportive services, poor socioeconomic infrastructure, and the like.

All the challenges the agricultural system experiences are well known and much has been done with the aim of reducing the challenges and their consequences. In addition to the

national efforts in this line, the Amhara Regional Government has tried to develop and implement policies, strategies and methods meant to bring about enhanced and sustainable development in the region. Land use and administration policy, 20 years agricultural research master plan, environmental protection policy, forest policy, and different trade and investment policies and directives are some of the efforts with considerable contributions. Institutional infrastructures have been set up and efforts are being exerted to put into practice the policies and strategies developed (Girma et. al, 2005).

Demographic Characteristics: The Amhara region is a very big and probably one of the most populated region in Ethiopia. Amhara, Oromo, Awi and Tigre communities live in the region with harmony and interdependence. Christians, Muslims, and others also live together in the region. According to Bureau of Finance and Economic Development (BoFED) of the ANRS, the population of the region was estimated to be 20.1 million, for the year 2008. Males constituted 48.8% of the population while females made the remaining 49.9% with an annual growth rate of 1.7 % (BoFED, 2008). This makes the gross population density 100.78 persons/km². When we look at the age structure of the population estimated, more than 43.45% of the population is very young being in age range of 0-14 years. On the other end, 3.52% of the population is too old being in age range of 65 years and above. While 53.3% of the population was categorized under 15-64 age group in which this group is assumed to be economically active.

Physical Characteristics : In terms of the traditional agro-ecologic classification, the region is composed of Bereha 3% (below 500 masl), Kolla 22% (500-1500 masl), Woinadega 44% (1500-2300 masl), Dega 27% (2300-3000 masl), Wurch 3.6% (3000-3700 masl), and high Wurch 0.4% (above 3700 masl). The recorded annual mean temperature of the region ranges from 12.4 or in Mehal Meda (Dega) to 27.8⁰c in Metemma (Arid Kolla). The highest rainfall

occurs in Meher season which starts in mid June and ends in early September. The land use pattern of the region is 28.2% arable land, 30% pastoral land, 2.1% forest land, 12.6% bush land, 7.2% settlement, 3.8% water bodies, and 16.2% is unusable land . The region is rich of rivers and water bodies and is the source of the famous Blue Nile and owns some other 49 perennial rivers. Despite the presence of such enormous water wealth, the region is characterized by rain fed and subsistence farming. And the population is highly vulnerable to drought led famine (Girma et. al, 2005).

Economic activities: Being an agrarian region, 3.862 million hectares of land were cultivated and 54.37 millions of quintals of crops have been produced in the production year 2007/08. The regional contributions of grain production were 35.26% from the total cultivated land and 33.74% from the total grain production of the country (CSA, 2008).

How ever , the entire agricultural activity is characterized by unreliable rainfall, soil and water erosion and degradation, crop pests and diseases, livestock pests and diseases, shortage of farm land, scarcity of animal feed, lack of improved and appropriate technologies, lack of supportive services, poor marketing and service infrastructure, and low terms of trade. The average landholding was found to be 1.04 hectares per household. The average holding of cultivated land was found to be 0.92 hectares per household that of grazing land was 0.09 hectares, that of woodlot was 0.02 hectares, and that of others was found to be 0.013 hectares per household. This is quite small figure in all means of measurement. The per capita land holding, calculated with average family size of 5 persons, would better show how small the landholding is. Some 25.1% of the households have no ox and 44.7% of the sample households have only one ox. The livestock population constitutes 29.4% of the national livestock wealth. In this regard, cattle, sheep, and equines are the most important sources of traction power, meat, milk, skin and hides. Cattle constitute the largest proportion (85.2%) of the total tropical livestock unit. There is high intensity of livestock pressure on the existing

grazing land. As a result, the production and productivity of the livestock sector in the region is low (BoFED, 2003).

Cooperatives in Amhara Region: The regional government believes on the existence of cooperative as key elements of rural development and gives due emphasis. The Regional Cooperative Promotion Agency is the institution responsible for mobilizing and organizing people and assisting cooperative organizations. As a result, there are 5,212 different types of primary cooperatives with a total of 2,167,572 members of which 270,946 (12.5 %) are females while 68 % of the regional households become members of different types of cooperatives in the region (ARCPA, 2008).

As cooperative unions are the recent phenomenon in the region, it was possible to attain in organizing 52 secondary level different types of unions. These cooperatives unions have registered total capital of Birr 207,948,194 and become participants in the economic development efforts of the region. This data also shows that 42 cooperative unions have bought and sold 184,036 quintals of grains and 1,555,836 quintals of fertilizer in the year 2008 (ARCPA, 2008).

3.1.2 An Overview of East Gojjam Zone

East Gojjam is one of the 11 administrative zones in Amhara Regional State located in eastern part of Gojjam placing its capital city at Debre Markos. It has total population of 2,152,671 of which 1,066,094 (49.52%) are males and 1,066,577 (49.54 %) are females with 448,782 households (CSA, 2007). East Gojjam is bordered on the south by the Oromiya Region, on the west by West Gojjam Zone, on the north by South Gondar Zone, and on the east by South Wollo Zone. The bend of the Abay River defines the Zone's northern, eastern and southern boundaries. This zone has 17 rural and 4 urban woreda administrations. It is conducive for grain production: about 521,840 hectares of land is covered by different crops

that can produce 19,492,632 quintals of different grain 2007/08 in crop production year. The rural household has an average of 1.1 hectare of land holdings. Cooperatives are part and parcel of the rural development effort that 453 different types of registered cooperatives are functioning in East Gojjam Zone. These cooperatives have 360,985 members of whom 307,874 are males and 53,111 (7%) are females and owned Birr 44,986,528 capital.

The total volume of grain marketed through MPCs in East Gojjam Zone in the year 2008 was 65,570 quintals by birr 34,880,172 purchasing price (EGZARDD, 2007/08).

Table 5: Cooperative in East Gojjam Zone, 2009

Types of cooperatives	No. of coop	Members			Share capital
		Male	Female	Total	(Birr)
Multipurpose cooperatives	187	287,853	45,647	333,500	40,678,024
SACCOs	161	9,166	2,818	11,987	1,548,371
Irrigation cooperative	19	1,775	133	1,908	104,053.9
Honey bee products cooperative	6	1,075	34	1,109	337,041.75
Gum and Resin cooperative	3	268	36	304	21,700.36
Dairy cooperatives	19	907	87	994	1,027,177.4
Consumers cooperatives	27	5444	4,230	9,674	862,213.46
Handcrafts cooperatives	12	281	25	306	31,331.72
Mining cooperatives	4	138	35	173	49,838.37
Electricity cooperatives	1	141	22	163	176,270.49
Meat products cooperatives	1	14	1	15	15,750
Natural resources cooperatives	13	812	43	855	134,755.66
Total	453	307,874	53,111	360,988	44,986,528.11

Source: EGZCPO, 2009 annual reports

3.2.3 An overview of Gozamn Woreda

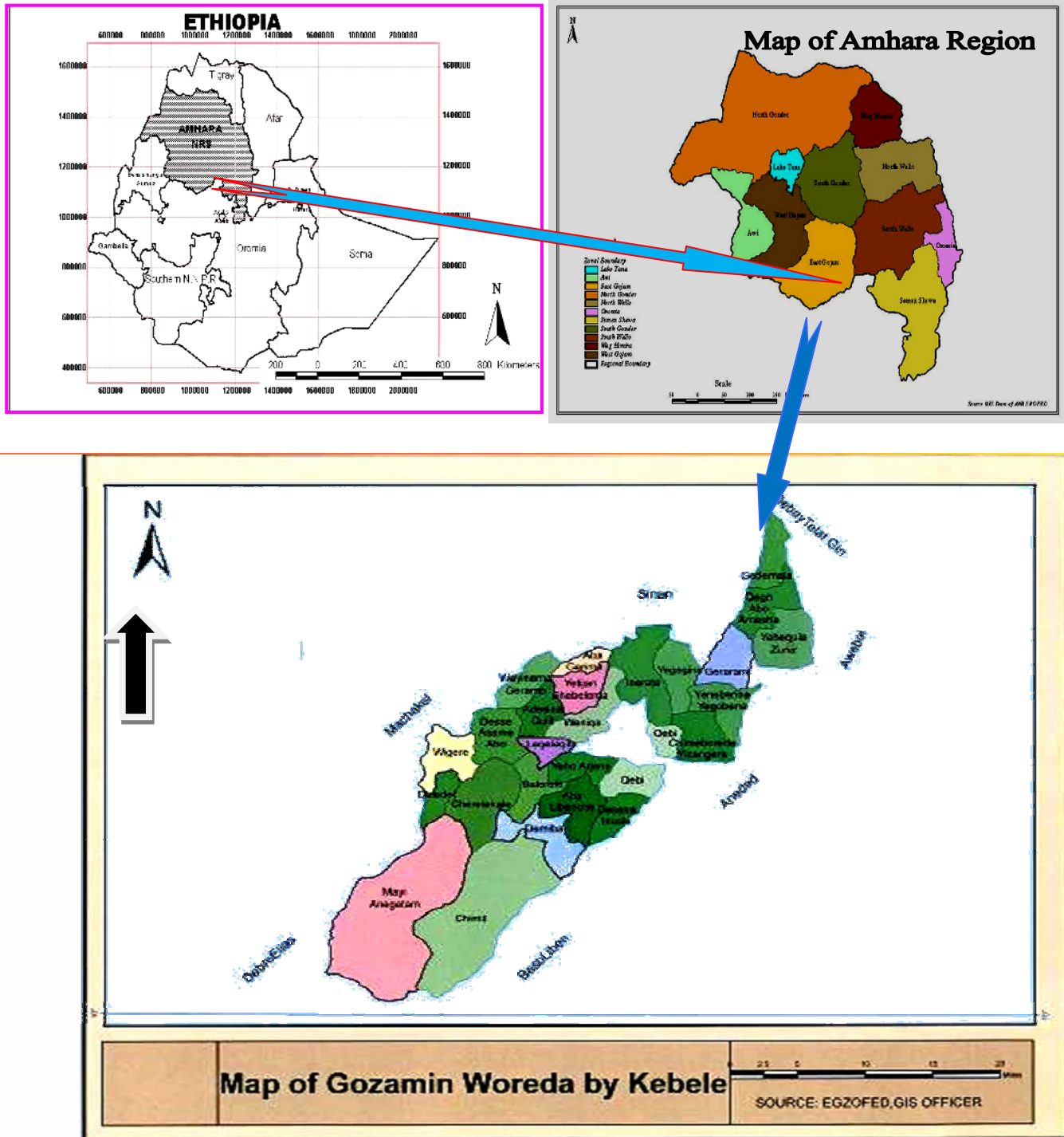
Gozamn is one of the 21 woredas in East Gojjam zone. This woreda is bordered on the south by Baso Liben Woreda, on the southwest by the Abay River which separates it from the Oromia Region, on the west by Machakel Woreda, on the northwest by Debay Telatgen Woreda, and on the east by Awabel Woreda. The zonal town and woreda of Debre Markos is

an enclave inside Gozamn. Based on figures published by the Central Statistical Agency (2007) this woreda has an estimated total population of 164,537 of whom 82,772 are men and 81,765(49.6 %) are women: 2,310 or 1.40% of its population are urban dwellers, which is less than the Zone average of 10.7%. On the other hand, of the total population, the share of active labor force (15-64) is 41,632 (25.3 %).The largest ethnic groups reported in Gozamn were the Amhara (99.95%). The majority of the inhabitants practiced Ethiopian Orthodox Christianity, with 99.94% reporting that as their religion. As reported in 2007/08 crop production year, the Woreda has cultivated 34,690 hectare of land for different crops and produced 1,333,595 quintals of crops from which 166,699 (12.5%) used as marketable surplus (CSA, 2006).

Cooperatives of different type at different levels were organized and participated in the socio-economic efforts undertaken in the woreda for the last several years. There are 9 multipurpose cooperatives (MPCs): 7 saving and credit cooperatives, 1 irrigation user's cooperative, 1 honey bee products marketing cooperative, 1 gum and raisin producers' cooperative, and 2 dairy products cooperatives. The total number of members is 16,615 among which 15,615 are males and 854 (5.46%) are females. The total capital of these different types of cooperatives was Birr 3,292,202. 72% of the households of the woreda have joined the cooperatives. Among the secondary level unions in the woreda, Gozamn Farmers Agricultural Cooperative Union (the first agricultural cooperative union in the region) and Menkoror Cooperatives Saving and Credit Cooperatives Unions are organized under the cooperative society's proclamation 147/98 in the year 2000 and 2008 respectively. Among the 21 cooperative societies, 9(64.2%) of them are multipurpose cooperatives that are essentially anticipated to perform the grain marketing services, input supply, provision of credit, and to train their members. These MPCs have 15,540 members of which 749 (4.8 %) are females. There are 5 local markets and one woreda market with 60 registered grain traders who are participating in grain marketing. Multipurpose cooperatives of the woreda are participating in grain purchase

and selling activities, starting from their reorganization on the spirit of cooperatives proclamation 147/98 in shareholding system.

Figure 2: Map of the study area



Source: East Gojjam Zone Finance and Economic Development Department, 2009

Table 6: cooperative in Gozamn Woreda, 2009

Ro.No	Types of cooperatives	No. of coops	Members			Share capital (Birr)
			Male	Female	Total	
1.	Multipurpose cooperatives	9	14,791	749	15,540	2,926,131.30
2.	SACCOs	7	283	65	348	39,378.08
3.	Irrigation cooperative	1	68	4	72	6,341.43
4.	Honey products marketing cooperative	1	295	29	324	274541
5.	Gum and Resin cooperative	1	87	-	87	8525.36
6.	Dairy cooperatives	2	91	7	98	37285.44
Total		21	15,615	854	16,469	3,292,202

Source: WA&RDO report, 2009

As to the report of the woreda agriculture and rural development office (in the year 2007), only 2 out of the 9 MPCs bought and sold 277.9 quintals of teff and 345.6 quintals of wheat and 3,018 quintals of different grains were bought and sold by nine MPCs in the year 2008 (WARDO,2009).

Table 7: Types and Quantity of grain sold through MPCs in the woreda (2007-2009)

Ro No	Name of participant coops	Marketed Volume(Qt)									
		White teff	Red teff	Mixed “Sergena”		Wheat(Bread)		bean	Niger seed	Rape seed	Total
				2007/08	2008/09	2007/08	2008/09	2008/09	2008/09	2008/09	2008/09
1	Argena	32.7	11.99	258	4.5	345.6	60.39	126.3	8.5	0.19	118
2	Chertekel	0.48	10.93		1.71		647		42.46	36	738
3	Dilenta	53.05	0.96		2.34		2.56		1.94	1.83	62
4	Fendika	95.1	18.81		128.6		84.4		99.87	31.7	458
5	Libanos	25.7			8		-		3.57		37
6	Maiagnetam	36.1	5.84		9.38		37.84		0.41		89
7	Wugir	-	72.11				859.8		313.5	95.7	1,341
8	Yebokla	22.7			33.55		1.25		62.2	1.47	121
9	Yefuacha	44.4	1.08		19.97		2.65		0.6	0.72	1.72
Total		310	121.7	277.9	190.7	345.6	1,693	189	470.9	168	3,018

Source: WARDO 2008/09 Annual report

3.2 Sampling Design and Frame

Gozamn Woreda has been purposely selected for this study because it was one of the grains producing area in the zone where there was considerable marketable grain sold through different marketing channels for the last several years. In the interim, the volume of grain marketed through multipurpose cooperatives in the woreda was found as low as 2% compared to the 166,699 quintals of total marketable surplus in 2008/09 production year. Thus, trying to assess the role and achievements of MPCs in grain marketing in the woreda was the main concern of this study (WARDO, 2008/09).

3.2.1. Sampling method

Two-stage systematic random sampling method was used for the purpose of this study.

1st stage-Among the nine MPCs, 4 (44 %) MPCs and

2nd stage- 150 cooperative members were selected from 7,963 members of the cooperatives by using systematic random sampling methods of proportionate to size (PPS). In addition, 12 MPCs leaders (three from each), 10 cooperative promoters and experts from woreda agriculture and rural development office and 7 *kebele* cooperative extension workers were involved in three focus group discussion to evaluate the roles of MPCs and other actors in grain marketing.

Table 8: sample frame of the study

Name of the selected Woreda	Total No. of MPCs	Name of sampled MPCs	Individual members			Sample Members
			Male	Female	Total	
Gozamn	9	Argena	764	102	866	17
		Chertekel	2,297	52	2,349	44
		Fendika	3,079	183	3,262	61
		Wugir	1,412	74	1,486	28
Total	9	4	7,552	411	7,963	150

3.2.2 Data Collection

Both primary and secondary data were employed for this study.

3.2.2.1 Primary data

Primary data were collected on age of respondents, marital status, sex of the household head, educational level, family size, family income, size of landholding, livestock ownership, duration of membership, awareness about cooperatives, patronage payment, availability of credit, marketing service of cooperatives, distance of the house of the household head from multipurpose cooperative, expenditure types and volume of grain produced and other relevant variables from the sample respondents who are members of the primary multipurpose cooperatives selected for the study.

3.2.2.2 Secondary data

In addition to the primary data, secondary data related to the number of cooperatives by type, membership by sex and age, volume and value of grain marketed by the sample cooperatives, dividend paid to members, the qualification of employees of cooperatives, storage and other marketing infrastructures and other relevant data were collected from zone agriculture and rural development department, zone cooperatives promotion office, woreda agriculture and rural development office, primary and secondary cooperatives, CSA, federal cooperative agency, regional cooperative agency.

3.2.2.3 Method of data collection

A structured interview schedule was developed to collect the desired primary data. The interview schedule was first prepared in English and translated into Amharic for convenient field work. The interview schedule was pre-tested before actual administration with 15 cooperative members followed by modification of the items. Four data collectors were selected and adequately trained by the researcher. The researcher has fully participated in the

interview operations and closely supervised and guided the four enumerators during the whole period of data collection.

3.3 Method of Data Analysis

3.3.1 Descriptive Statistics

By employing descriptive statistics we can compare differences among categories of sample units with respect to the desired characteristics. In this study, descriptive statistics such as mean, standard deviation, percentages and frequency of occurrence were used along the econometric model, to analyze the collected secondary and primary data. Moreover, socioeconomic settings of respondents were analyzed and presented using tables, graphs, charts and percentages.

One way ANOVA tests

Nominal and ordinal response variables like access to cooperative training, the presence of qualified employees in MPCs, cooperative purchase period, storage capacity of the MPCs, and corruption in cooperative property were analyzed by one way ANOVA to test the mean value differences among groups followed by p-value to test the existence of significant relationship with the dependent variable.

T-tests

Continuous response variables like age of the household head, level of education of household head, family size, number of ox, distance of the MPCs from the household residence, participation on cooperative meetings, cooperative average purchasing price for teff and wheat, duration of membership, patronage refund and access to market information have been tested by using *T*-test whether there is significant mean difference among the response groups and it has an effect on outcome variable while controlling for other *X*'s constant.

3.3.2 Specification of the Multiple Regression Model

This study is expected to analyze which and how much the hypothesized regressors are related to the volume of grain sold through multipurpose cooperatives. From the mathematical point of view, the multiple regression models is used due to its simplicity and flexibility in the data analysis (Maddala, 1992).

Therefore, the multiple regression models are specified as follows:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots \dots \dots \beta_k X_k + \epsilon \dots \dots \dots (1)$$

Where Y = represents the dependent variable (quantity of teff and wheat sold through MPCs)

β_0 = denotes the intercept of the regression which is constant

$\beta_{i,j} = 0, 1 \dots k$, are called the regression coefficients, the parameter β_j represents the expected change in the response Y per unit change in X_j when all the remaining regressor variables X_i ($i \neq j$) are held constant. For this reason the parameters $\beta_{j,j} = 1, 2 \dots k$, are often called partial regression coefficients.

$X_1, X_2 \dots X_k$ = refers to the regressor variables(price, storage capacity, distance, level of education, information, training, participation on cooperative meetings, corruptions, family size, patronage refund, duration of membership, qualified employees, oxen, ownership, purchase period, age of respondents). Multiple linear regression models are often used as approximating function. That is, the true functional relationship between dependent independent variable.

ϵ = is the error or deviation between Y value and the expected value of Y

Test for Significance of Regression

In multiple regression tests of hypothesis about the model parameter are useful in measuring model adequacy. The test for significance of regression is a test to determine if there is a

linear relationship between the response Y and any of the regressor variables $X_1, X_2 \dots X_k$.

Separate tests of the null hypothesis that individual coefficients are zero can be computed using t-test of the multiple linear regression model. This test can be used to see the statistical significance of each coefficient.

The appropriate hypotheses are:

$$H_0: \beta_1 = \beta_2 = \dots \beta_k = 0$$

$$H_1: \beta_j \neq 0 \text{ for at least one } j \dots \dots \dots (2)$$

Rejection of H_0 in the above hypothesis implies that at least one of the regressors $X_1, X_2 \dots X_k$ contributes significantly to the model.

Coefficient of Multiple Determinations

The coefficient of multiple determinations R^2 is defined as

$$R^2 = SSR/Syy \dots \dots \dots (3)$$

The multiple coefficient of determination represents the percentage of variability in Y that is explained by the estimated regression equation. We have $0 < R^2 < 1$ as in the case of simple regression. The positive square root of R^2 is the multiple correlation coefficients between Y and the set of regressor variables $X_1, X_2 \dots X_k$. That is, R is a measure of the linear association between Y and $X_1, X_2 \dots X_k$.

The functional relationship between the probability of quantity of teff and wheat sold through MPCs and explanatory variables is specified as follows:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots \beta_k X_k + \epsilon \dots \dots \dots (4)$$

Where Y is the quantity of teff and wheat sold through MPCs

β_0 is Constant or intercept,

$\beta_1, \beta_2, \dots, \beta_k$ refers regression coefficients, X_1, X_2, \dots, X_k , like price, storage capacity of the MPCs, age of the household head, education level of household head, family size, number of oxen, distance of the cooperative from the house hold residence, cooperative purchasing price for teff and wheat, duration of membership, patronage refund and access to market information, participation on cooperative meetings, patronage refund, corruptions on cooperative assets.

3.4 Operationalization of variables

After having appropriate analytical tools, it is possible to identify, define and describe the dependent and independent variables with their appropriate symbols and measurements in a workable way. This issue is addressed in the following discussion.

3.4.1 The dependent variable of the model

Quantity of grain sold through MPCs (QUANT. SOLD): Multipurpose cooperatives are owned by the people who use it, controlled by and benefits generated by the cooperative accrue to its users on the basis of their use (USDA, 2002). As a key role for multipurpose cooperatives, delivering marketing service and participating of members in buying and selling function is paramount. Members of the cooperatives in the study area have sold some amount of their agricultural produces through their cooperative. Nevertheless, the volume of grain sold through MPCs was less than two percent compared to the total marketed amount of grain through different marketing channels and market actors. As a result, this dependent variable is hypothesized to be influenced by several socioeconomic and environmental factors where some of them are discussed below.

3.4.2 The Independent Variables of the Study

The independent variables that were anticipated to influence volume of grain sold through cooperatives can be several types. Those independent variables are explained as follows.

Age of the household head (AGEHH): Age is a continuous independent variable indicating the age of the household head in years. The households' previous experiences may have either positive or negative impact, and this may likely influence his or her attitude on participation in the grain marketing through MPCs.

Education level of house hold head (EDUCTN): It is a continuous variable and refers to the number of years of formal schooling the farmer attended. The higher the education level, the better would be the awareness of the farmer towards the cooperative and acquire information and education about the benefits of the cooperative. Thus, this variable is expected to influence the cooperatives sales volume of grain sold through multipurpose cooperative positively.

Family size (FAM.SIZE): This is a continuous explanatory variable and refers to the total number of members in a household. It is assumed as family size of a household increased, much of the produces may be expended as consumption and little will remain to be marketable surplus. Therefore, family size is expected to have negatively influenced quantity of grain sold through the MPCs.

Number of oxen (OXEN): This is a continuous variable which represents the number of oxen possessed by the household during 2008 /09 production year for the purpose of draft power. Farmers with large farm size needs to have more number of oxen for cultivation. This may result in more use of agricultural inputs and production of more grains (teff and wheat). Therefore, having more number of oxen may enable to cultivate larger farmland which in turn leads to produce more grain and attain marketable surplus. Consequently, number of oxen, as

a variable is hypothesized to have positive relationship with the quantity of grain (teff and wheat) sold through MPCs.

Distance of the MPCs from the farmer's residence (DISTANCE): It is a continuous variable measured in hours refers to the distance of the cooperative from the farmer's house. The proximity of the cooperative from the farmer's residence reduces the cost of time and labor that the farmers spent in searching for market to sale teff and wheat. Therefore, in this study, as distance of the cooperative from the farmer residence increases, it may negatively influence grain marketing performances of the MPCs.

Cooperative purchasing price for teff and wheat (CO.PR.PRC): This is a continuous variable. Cooperatives are operating under free market economy in which the price of goods and services could be determined by market forces of demand and supply. Therefore, cooperative average purchasing price for a quintal of teff and wheat should be competitive to attract members to the cooperatives. As purchase price of MPCs become more competitive, it may positively influence the quantity of grain to be sold to MPCs.

Duration of Membership in the MPCs (DUR.MEM): This is a continuous variable which measures the number of years a member sustained in the cooperative. It is hypothesized that as duration of membership increase, the members can acquire knowledge from the cooperatives through training, information and meetings that could increase the awareness of members. This may positively influence the volume of grain to be sold to the MPCs.

Storage capacity of cooperative (SOTR.CAP): It is a dummy variable represents the storage capacity of cooperative. From the researcher's experience, most of the MPCs have actively participated in grain marketing at the main harvest and purchase seasons. As a result, those cooperatives that do not have sufficient storage warehouses were adversely affected by the shortage of appropriate storage spaces. Having this in mind, this variable measures the

perception of a member towards his/her belief on their cooperative storage was enough to purchase the required quantity as 1, and 0 otherwise. It is hypothesized that storage capacity has positive relationship with quantity sold grain sold to MPCs.

Access to market information (ACC.MAR.INF): It is a continuous variable that represents the number of sources a member was familiar with market information in the main grain marketing seasons. It measures the member of market information sources. It is also assumed that as the availability of market information increased, it may have positive relationship with quantity of grain sold to cooperatives

Member participation (PARTICIPATION): It is a continuous variable which indicates the number of times a member has participated in cooperative meetings to create awareness and decide on the issue of cooperatives. It is assumed that it may positively influence the grain marketing decision of members through cooperatives as participation and decision making on the issue of cooperative increases.

Access to cooperative training (ACC.TRN): It is a dummy variable which represents the number of times a member has got training about grain marketing role and objectives through cooperatives. It is measured as 1 if the member attended cooperative training at least once and 0 otherwise. It is assumed to have positive relationship with quantity of grain sold to cooperatives.

Qualified Employees in cooperative (QUL.EMP): A dummy variable represents the educational level of employees in a cooperative as perceived by the respondents in delivering marketing services in efficient ways. It has a value of 1 if the perception of the respondent is yes and 0 otherwise. It may have positively influence the quantity of grain sold to cooperatives.

Cooperatives Grain purchasing period (PUR.PER): A dummy variable that represents the purchase season the cooperatives actively participate in grain marketing. It is measured as 1 if the cooperative was ready to purchase every day in the main harvest season and 0 otherwise. As the purchasing days (periods) are familiar with production, it may positively influence quantity of grain sold to cooperatives.

Patronage Refund⁵ (PATR.REF): It is a continuous variable which measures the amount of money a member received from his cooperative in 2008/09. It is expected to influence the marketing of grain through the cooperatives positively. If a farmer has got a patronage from the cooperative, he/she may be motivated to increase the volume of grain to be sold through cooperative.

Corruption of Cooperative's Property (CORRUPT): This is a dummy variable as perceived by the respondent and takes the value 1 if he/she was informed about misappropriation of their cooperative's property and 0 otherwise. The assumption in this study is that if there is corruption of cooperative's property, the farmer's decision to sale and volume of grain to be sold through the cooperative will be decreased. Therefore, this variable is expected to affect the farmer's decision and the volume of grain to be sold negatively.

⁵ *Patronage refund is the net profit of cooperatives that are distributed to the member patrons (business participants) based on their participation.*

Table 9: Description of dependent and Independent variable

No	Variable	Code of Variable	Type	Description of variable
1	Dependent variable			
	Quantity of teff and wheat sold through MPCs	QUAN.SOLD	Continuous	The actual quantity of teff and wheat sold by members through MPCs in 2008/09 measured in quintals
2	Independent variables			
2.1	Age of the house hold head	AGEHH	Continuous	Age of the house hold head measured in years
2.2	Education level of house hold head	EDUCTN	continuous	The level of formal schooling of the household head measured in Grades
2.3	Family size	FAM.SIZE	Continuous	Total number of families in a house hold measured in number
2.4	Number of oxen	OXEN	Continuous	Number of ox owned by the house hold during 2008/09 as measured in number
2.5	Distance of the MPCs	DISTANCE	Continuous	Distance in between MPCs and household residence as measured in foot hours
2.6	purchasing price of teff & wheat	COOP.PRC	Continuous	Average Price paid for a quintal of teff and wheat as measured in (Birr)
2.7	Duration of membership	DUR.MEM	Continuous	The numbers of years a member survived in MPCs , measured in years
2.8	Patronage refund	PAR.REF	Continuous	The amount of money a member benefited from MPCs in 2008/09, measured in(Birr)
2.9	Access to market information			The numbers of sources of market information a house hold has got in

		ACC.MAR.INF	continuous	the main grain marketing seasons
2.10	Access to cooperative training	ACC.TRA	Dummy	Dummy with a value of 1 if the house hold head attained cooperative training and 0 otherwise
2.11	Participation on coop. meetings	PARTICIPATION	Continuous	The number of times a member has participated in coop. meetings
2.12	Qualified employees in MPCs	QUL.EMP	Dummy	Dummy value of 1 if the respondent accept and 0 otherwise
2.13	Cooperative purchase period	PUR.PER	Dummy	Dummy value of 1 if the cooperative purchased whenever he needs and 0 otherwise
2.14	Storage capacity of the MPCs	SOTR.CAP	Dummy	Dummy value of 1 if the respondent perceived as sufficient and 0 otherwise
2.15	Corruption in cooperative property	CORRUPTION	Dummy	Dummy value of 1 if the respondent was informed about corruptions on cooperative and 0 otherwise

CHAPTER FOUR

RESULTS AND DISCUSSIONS

In this chapter, the main findings of the study are presented. Discussion results of the focus groups on the role of multipurpose cooperatives in grain marketing, tables, percentages, graphs and charts are used to present the distribution of farmers and the quantity of teff and wheat sold through. Descriptive analysis results such as mean, standard deviation and percentage. The t-value of the continuous variables and one way ANOVA tests were employed to compare the mean value of responses and their relationships with the independent variables. Econometric analysis was also employed to identify the most important factors influencing the volume of grain sold through MPCs in the study Woreda.

4.1 Socio-economic Characteristics of Sample Farmers

This part presents the result from descriptive statistical analysis. The descriptive statistical analysis used percentages, mean and standard deviation. The t-value was also utilized to identify the most important factors that influence the marketing of teff and wheat through multipurpose cooperatives. **Note that in each of the tables indicated below, the numbers in parenthesis across the rows represent percentage.**

4.1.1 Sex

Out of the sample farmers, 96.66 % were male headed and 3.33% were female headed. As a result, the majority of the cooperative members in the study area were males. This result could enlighten us the existence of unbalanced distribution of male and female in the sampled cooperatives. The one way ANOVA analysis shows that there was no significant mean value difference among the sex groups and no significant relationship between the sex groups and quantity of grain sold through MPCs.

Table 10: Distribution of farmers by sex and quantity of grain sold through MPCs

Sex group	Quantity Sold (in quintal)				Total
	None	0.50-2.00	2.01-4.00	4.01-6.00	
Female	4(2.67)	1(0.67)	0(0.00)	0(0.00)	5(3.33)
Male	84(56.00)	32(21.33)	17(11.33)	12(8.00)	145(96.67)
Total	88(58.67)	33(22.00)	17(11.33)	12(8.00)	150(100.00)
<i>P-value(0.282)</i>					

Source: Computed from survey data

4.1.2 Age

The average age of the sample farmers was 47.32 years with a standard deviation of 14.57 as well as a minimum and maximum age of 24 and 88 years, respectively. The t-test shows that there were no significant mean differences among the age groups and there was no significant relationship between age of respondents and quantity of teff and wheat sold through MPCs.

Table 11: Distribution of farmers by age and quantity of grain sold through MPCs

Age group	Quantity Sold (in quintal)				Total
	None	0.5-2.00	2.01-4.00	4.01-6.00	
24-45	45(30)	16(10.67)	7(4.67)	5(3.33)	73(48.67)
46-67	34(22.6)	16(10.67)	9(6)	5(3.33)	64(42.67)
68-89	9(6)	1(0.67)	1(0.67)	2(1.33)	13(8.67)
Total	88(58.67)	33(22.00)	17(11.33)	12(8.00)	150(100)
Mean	47.83	46.06	46.53	48.53	47.33
Std.Deviation	14.703	12.66	15.52	18.45	14.57
Minimum			24		
Maximum			88		
P- value (0.502)					

Source: Computed from survey data

4.1.3 Marital Status

Out of the total sampled respondents, 3.3%, 88%, 5% and 8% were single, married, divorced and widowed respectively. The one way ANOVA analysis shows there were no significant group mean differences and no significant relationship between the sex groups and quantity of grain sold through MPCs.

Table 12: Distribution of farmers by marital status and quantity of grains sold through MPCs

Marital status	Quantity Sold (in quintal)				Total
	None	0.50-2.00	2.01-4.00	4.01-6.00	
Single	4(2.67)	1(0.67)	0(0.00)	0(0.67)	5(3.33)
Married	74(49.33)	30(20.00)	17(11.33)	11(7.33)	132(88)
Divorced	4(2.67)	0(0.67)	0(0.00)	1(0.67)	5(3.33)
Widowed	6(4.00)	2(1.33)	0(0.00)	0(0.00)	8(5.33)
Total	88(58.67)	33(22.00)	17(11.33)	12(8.00)	150(100)
<i>P-value(0.5875)</i>					

Source: own survey data

4.1.4 Education Status

Having better educational status could help members to acquire knowledge that enables to increase farm production and productivity. From the total sample farmers, 42.67% were found illiterate, 43.33% were able to read and write, 5.33% completed grades 1-4, 8% completed grades 5-8 and <1% completed grades above 8- 10. The t-test shows that statistically there was no significant difference in the mean value of educational status groups and no significant relationship with quantity of grain sold through MPCs.

Table 13: Distribution of farmers by level of education and quantity of grain sold through MPCs

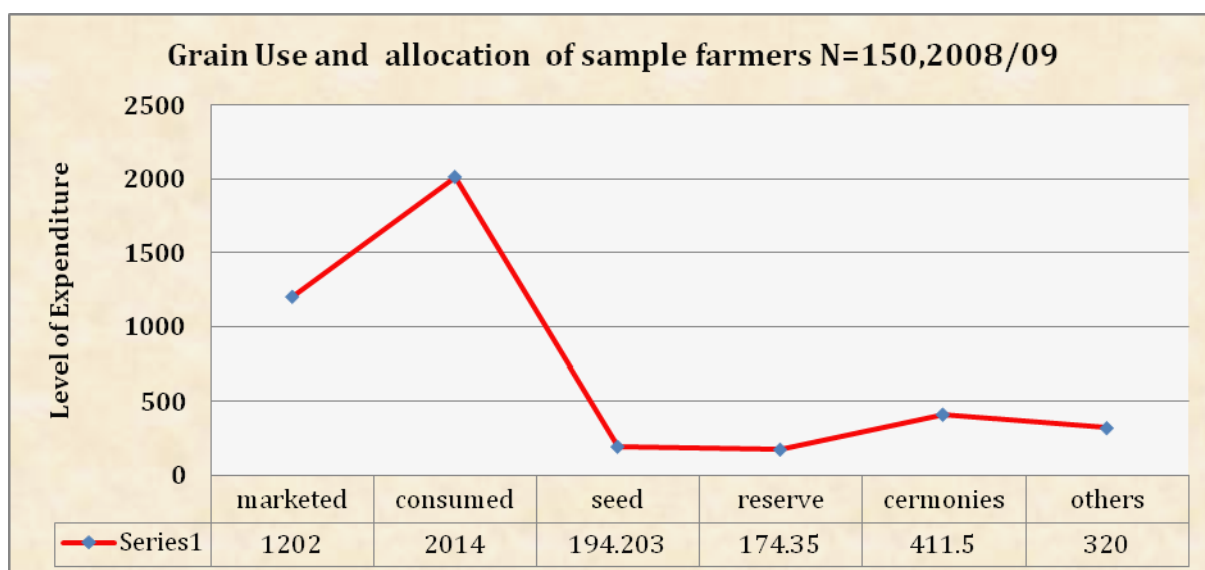
Education Level	Quantity Sold (in quintal)				Total
	None	0.50-2.00	2.01-4.00	4.01-6.00	
Illiterate	37(24.67)	13(8.67)	9(6.00)	5(3.33)	64(42.67)
Read & write	37(24.67)	14(9.33)	7(4.67)	7(4.67)	65(43.33)
1-4	6(4.00)	1(0.67)	1(0.67)	0(0.00)	8(5.33)
5-8	8(5.33)	4(2.67)	0(0.00)	0(0.00)	12(8.00)
9-10	0(0.00)	1(0.67)	0(0.00)	0(0.00)	1(0.67)
Total	88(58.67)	33(22.00)	17(11.33)	12(8.00)	150(100.00)
Mean	1.23	1.58	0.65	0.58	1.19
Std.Deviation	1.824	2.48	0.996	0.525	1.80
Minimum		0(Illiterate)			
Maximum		10			
T-value (0.316)					

Source: Computed from survey data

4.1.5 Religion

Out of the sampled farmers, the religion of 150(100%) farmers was Orthodox Christian. Statistically, religion did not have a significant relationship with grain sold through MPCs. But there was other important look related to religious ceremonies and festivals undergone for the last several years in the Orthodox Christian people of the woreda. As a result, out of the total produces 9.48 % of the agricultural produces was spent for several cultural ceremonies like, *mahiber*, *senbete*, *weeding*, *zikirt*, which are associated with farmers' religion. This form of expenditure may have its own negative effect on the volume of marketable surplus to be marketed through MPCs.

Figure 3: Distribution of farmers by grain production and allocation



Source: computed from surveyed data, 2010

4.1.6 Family Size

There were 665 family members in the 150 farmer households with the maximum family size of 10 persons. It was hypothesized that family size may have negative relationship with quantity of grain sold through MPCs. That means, as family size increase, consumption also increases that may influence marketable surplus. Though the statistical t-test resulted as there was some mean value differences among family groups, the difference was not statistically significant and no significant relationship between family size and quantity of grain sold through multipurpose cooperatives. The study also clarifies the excessive average production over consumption on the sampled farmers in the proportion of 28.93 average quintals of grain per 4.43 household.

Table 14: Distribution of farmers by family size and quantity of grain sold through MPCs

Family group	Quantity Sold (in quintal)				Total
	None	0.5-2.00	2.01-4.00	4.01-6.00	
0(None)	2(1.33)	1(0.67)	1(0.67)	0(0)	4(2.67)
1-3(low)	21(14)	7(4.67)	7(4.67)	4(2.67)	39(26)
4-7(medium)	60(40)	24(16)	9(6)	8(5.33)	101(67.33)
8+(high)	5(3.33)	1(0.67)	0(0)	0(0)	6(4)
Total	88(58.67)	33(22.0)	17(11.3)	12(8.0)	150(100)
Mean	4.60	4.55	3.65	4.00	4.43
Std.Deviation	1.933	1.872	2.029	1.044	1.887
Minimum0					
Maximum10					
sum665					
T-value (1.309)					

Source: Computed from survey data

4.1.7 Farming Experience

Farming experience is another important factor for the success of marketable surplus in farming business. The average years of farming experience of the sample farmers was computed as 27.32 years and with a standard deviation of 15.38. Statistically, the t-test shows that there was no significant mean difference in the farming year groups of respondent and no significant relationship between farming experience of respondents and the quantity of grain sold through MPCs.

Table 15: Distribution of farmers by farming years and quantity of grain sold through MPCs

Farming years	Quantity Sold (in quintal)				Total
	None	0.5-2.00	2.01-4.00	4.01-6.00	
1-20	35(23)	13(8.67)	2(1.33)	1(0.67)	51(34)
21-40	35(23)	15(10)	9(6)	9(6)	68(45.3)
41-60	14(9.3)	5(3.3)	5(3.3)	2(1.33)	26(17.33)
60+	4(2.67)	0(0)	1(0.67)	0(0)	5(3.33)
Total	88(58.67)	33(22.00)	17(11.33)	12(8.00)	150(10.00)
Mean	28.25	25.27	37.71	36.83	29.35
Std.Deviation	15.118	15.45	15.344	11.496	15.38
Minimum	1				
Maximum	69				
T-value(-1.047)					

Source: Computed from survey data

4.1.8 Duration of Membership in the Cooperatives

Cooperatives are established to solve the common problems of farmers that cannot be solved by working independently. The majority of the MPCs in the study woreda were established in 1979-1981. As a result, the average years of membership for sample farmers was 17.67 years with a standard deviation, minimum and maximum year of membership 12.07, 1 and 33 years respectively. The statistical t-test shows that there were no significant mean difference in the duration of membership groups and no significant relationship between duration of membership and quantity of grain sold through MPCs.

Table 16: Distribution of farmers by duration of membership and quantity of grain sold to MPCs

Duration of membership	Quantity Sold (in quintal)				Total
	None	0.50-2.00	2.01-4.00	4.01-6.00	
1-10	39(26.00)	16(1067)	7(4.67)	7(4.67)	69(46)
11-20	13(8.67)	5(3.33)	1(0.67)	1(0.67)	20(13.33)
21-30	14(9.33)	4(2.67)	2(1.33)	2(1.33)	22(14.67)
above 30	22(14.67)	8(5.33)	7(4.67)	2(1.33)	39(26)
Total	88(58.67)	33(22.00)	17(11.33)	12(8.00)	150(100)
Mean	17.37	16.00	20.17	14.58	17.67
Std.Deviation	12.14	11.48	12.71	12.81	12.07
Minimum	1				
Maximum	33				
T-value(0.251)					

Source: Computed from survey data

4.1.9 Land Ownership

Land is one of the major factors for the production of crop and livestock. The size of land owned by sample farmers varied from 0 to 3 hectares with an average holding of 1.72 and a standard deviation of 0.8 hectares. The statistically computed t-test shows that there was no significant mean difference in land ownership groups and no significant relationship between size of land holdings and quantity of grain sold through MPCs.

Table 17: Distribution of farmers by land holding and quantity of grain sold through MPCs

Land holding	Quantity Sold (in quintal)				Total
	None	0.50-2.00	2.01-4.00	4.01-6.00	
0.01-1.00	32(21.33)	8(5.33)	7(4.67)	7(4.67)	54(36)
1.01-2.00	30(20.00)	14(9.33)	5(3.33)	2(1.33)	51(34)
2.01-3.00	26(17.33)	11(7.33)	5(3.33)	3(2)	45(30)
Total	88(38.67)	33(22)	17(11.33)	12(8)	150(100)
Mean	1.7202	1.840	1.764	1.416	1.72
Std.Deviation	0.820	0.799	0.854	0.701	0.80
Minimum			0.25		
Maximum			3.00		
T-value(-0.132)					

Source: Computed from survey data

4.1.10 Cropping Pattern and Crop production of Respondents

Gozamn Woreda is well known in grain production. The farmers grew cereals, pulses and oil seeds for food and market transaction to meet their cash necessities. As shown in table 18, the total area of land cultivated and amount of grain produced in 2008/09 was 235 hectares and 4316 quintals respectively. Wheat, maize and teff were the leading grain which accounted 43.6 %, 23 % and 20.75 % in volume of production. Statistically, there was significant relationship between total volume of grain produced and quantity of grain sold through MPCs. Production of grain can be increased through full utilization of resources such as land, labor, modern agricultural inputs and extension services. The farmers have tried to increase the amount of the production by using these limited resources with the help of extension service. The total amount of grain produced by the sampled farmers was 2,778 quintals.

Table 18: Major crops produced by farmers (2008/09)

Crop type	Area covered (Hr)	Production (Qt)	Value (Birr)
Teff	77(32.7)	895(20.73)	691,973(20.75)
Wheat	57(24.2)	1,883(43.62)	805,917(43.6)
Maize	27(11.48)	992(22.98)	37,3105(23)
Barley	10(4.25)	199(4.61)	72,391(4.6)
Niger seed	48(20.42)	235(5.44)	145,505(5.44)
Beans	13(5.53)	90(2.08)	49,886(2.08)
Peas	3(1.27)	22(0.5)	1,3261(0.1)
total	235(100)	4,316(100)	2,152,038(100)
Minimum	1.50		
Maximum	100.00		
Mean	28.93		
Std.Deviation	13.698		
sum	4339.88		
T-value(2.80)			

Source: Computed from survey data

4.1.11 Livestock possessions

Farmers kept livestock for different purposes such as draught power, manure, source of income and consumption. The sampled farmers owned 994 cattle, 385 sheep & goat, 147 mules and donkeys, 343 poultry and 49 bee colonies with total value of Birr 2,300,912. The average livestock holdings of respondents were 12.78 in number and 17,809 values in Birr. In addition, respondents have gained an estimated value of Birr 109,825 from livestock products. Statistically, there no significant relationship between livestock ownership and quantity of teff and wheat sold through MPCs.

Table 19: Distribution of farmers by livestock holding (2008/09)

Livestock type	Number of Livestock	Value (Birr)
oxen	392(20.43)	1,061,960(46.50)
cows	271(14.12)	585,260(25.43)
calves	189(9.85)	174,550(7.58)
heifers	142(7.4)	196,840(8.55)
sheep	347(18.09)	109,075(4.75)
goat	38(2.00)	8,658(0.37)
Mule	2(0.1)	7,000(0.30)
donkey	145(7.55)	128,595(5.58)
poultry	343(17.88)	13,074(0.56)
Beehives	49(2.55)	15,900(0.69)
Total	1918(100)	2,300,912(100)
Mean	12.78	17,809
Std.Deviation	7.833	12,807
minimum	0.00(None)	
maximum	42	
T value(- 0.814)		
Livestock products		
Name of livestock products	Value (Birr)	
Milk and milk products	69,034(62.85)	
Honey and wax	10,144(9.2)	
Egg	30,647(27.9)	
Total	109,825(100)	

Source: Computed from survey data

4.1.12 Oxen Ownership

Farmers of the woreda plough their land by using oxen. It is clear that unless the land has been prepared timely, it could not have provided better yield. Out of the sampled farmers, 11(7.3%) farmers did not have ox while 43.33%, 44.67%, and 4% of the respondents have owned oxen ranging 1-2, 3-4 and 5-6 respectively with an average holding of 2.61 oxen and standard deviation of 1.315. Statistically, there was no significant mean difference among the oxen ownership groups and no significant relationship with quantity of grain sold through MPCs.

Table 20: Distribution of farmers by ox ownership and quantity of grain sold through MPCs

ox groups	Quantity Sold (in quintal)				Total
	None	0.50-2.00	2.01-4.00	4.01-6.00	
No ox	10(6.67)	1(0.67)	0(0.00)	0(0.00)	11(7.33)
1-2	34(22.67)	17(11.33)	10(6.67)	4(2.67)	65(43.33)
3-4	38(25.33)	15(10.00)	6(4.00)	8(5.33)	67(44.67)
5-6	5(3.33)	0(0.00)	1(0.67)	0(0.00)	6(4.00)
7 & above	1(0.67)	0(0.00)	0(0.00)	0(0.00)	1(0.67)
Total	88(58.67)	33(22.00)	17(11.33)	12(8.00)	150(100.00)
Mean	2.59	2.45	2.76	3.00	2.61
Std.Deviation	1.451	0.971	1.43	0.85	1.315
Minimum	0(No ox)				
Maximum	8				
sum	392				
T-value(-0.248)					

Source: Computed from survey data

4.1.13 Annual Income

The livelihood of farmers of the woreda is reliant on agriculture mainly on crop production and livestock rearing. During the survey period, the mean income for the sampled farmers was 30,641.39 birr with a standard deviation of birr 13,498.59. In addition, the minimum and maximum amount of income earned in 2008/09 was 71,937.00 birr and 1,680.00 birr

respectively. Statistically, there is no significant relationship between an earned income and the quantity of teff and wheat sold through MPCs.

Table 21: Distribution of farmers by annual income and quantity of grain sold through MPCs

Income group	Quantity Sold (in quintal)				Total
	None	0.5-2.00	2.01-4.00	4.01-6.00	
< 20,000(low)	34(22.67)	8(5.33)	4(2.67)	6(4)	52(34.67)
20,000.01-50,000(Medium)	45(30)	22(14.67)	11(7.33)	5(3.33)	83(55)
50,000.01(High)	9(6)	3(2)	2(1.33)	1(0.67)	15(10)
Total	88(58.67)	33(22)	17(11.33)	12(8)	150(100)
Mean	30985	28771	30803	33033	30641
Std.Deviation	14379	11044	12539	15218	13498
Minimum	1,680.00				
Maximum	71,937.00				
Sum	4,596,208.00				
T-value (0.371)					

Source: Computed from survey data

4.1.14 Use of Fertilizer

Agricultural inputs specifically DAP (Di-Ammonia Phosphate) and Urea chemical fertilizers are known for their response in increasing productivity to this area where farming is practiced for several years and severe soil erosion has been occurring due to poor agricultural practices. As a result, the volume of application expanded to other crops that have never been cultivated with the use of fertilizer. The survey results revealed that except 3(2%) of the respondents, the rest of the farmers used fertilizer by direct purchasing on cash basis from their cooperatives. The total amount of fertilizer used by the farmers was 400.65 quintals with an average amount of 2.66 quintals. Statistically, there was significant mean difference among groups of 2.01-4.00 and 4.01-6.00 and there was significant relationship between fertilizer use and the quantity of teff and wheat sold through MPCs at $P<0.05$ significant level.

Table 22: Distribution of farmers by use of fertilizer and quantity of grain sold through MPCs

Fertilizer use	Quantity Sold (in quintal)				Total
	None	0.50-2.00	2.01-4.00	4.01-6.00	
None	2(1.33)	0(0)	0(0)	1(0.67)	3(2)
0.01-2.00	52(34.67)	15(10)	9(6)	9(6)	85(56.67)
2.01-4.00	21(14)	14(9.33)	5(3.33)	2(1.33)	42(28)
4.01-6.00	13(8.67)	4(2.67)	3(2)	0(0)	20(13.33)
Total	88(58.67)	33(22)	17(11.33)	12(8)	150(100)
Mean	2.5057	2.537	2.76	4.088	2.61
Std.Deviation	1.3244	1.176	1.21	0.90	1.312
Minimum	0 (None)				
Maximum	6.00				
sum	400.25				
T-value(-1.836)					

Source: Computed from survey data

4.1.15 Participation on cooperative meetings

Members of the cooperatives are not only the users of their organization but also the controller by the use of cooperative meetings. As participation of members on the meetings of their cooperative increases, it may broaden the understandings of the members about cooperative benefits that may result positive thinking and peruse them to participate in grain marketing through multipurpose cooperatives. However, the result from surveyed data indicated that the mean participation of respondents was 0.813 which further indicated that the average participation was below those who have participated once. Statistically, participation has no significant relationship with the quantity of grain sold through MPCs.

Table 23: Distribution of farmers by participation in cooperative meetings and quantity of grain sold through MPCs

participation on cooperative meetings	Quantity Sold (in quintal)				Total
	None	0.50-2.00	2.01-4.00	4.01-6.00	
None	40(26.67)	12(8)	7(4.67)	8(5.33)	67(44.67)
participated once	23(15.33)	13(8.67)	7(4.67)	2(1.33)	45(30)
participated two times	24(16)	8(5.33)	3(2)	2(1.33)	37(24.67)
participate three times	1(0.67)	0(0)	0(0)	0(0)	1(0.67)
Total	88(58.67)	33(22)	17(11.33)	12(8)	150(100)
Mean	0.84	0.88	0.76	0.50	0.81
Std.Deviation	0.869	0.781	0.752	0.798	0.831
Minimum	0(None)				
Maximum	3				
T-value(0.483)					

Source: computed from survey data

4.1.16 Access to Cooperatives Credit

Cooperatives were the main sources of credit for farmers to purchase agricultural inputs for the last several years. However, there occurs a fundamental change with respect to access to credit. In the production year 2008/09, it was only 5(3.33%) of the respondents who could get credit from cooperatives to purchase only agricultural technologies like pedal pump, diesel generators and lime (to improve soil acidity). This was due to the cut of credit made by the government in imagining that farmers were having money at hand to purchase inputs on cash basis. Respondents were also asked about credit-cut made by the government that 57(38%) did not agree on this immediate credit-cut made by the government. The one way ANOVA analysis indicated that there is no significant mean difference between the users and non-user groups. Furthermore, there is no significant relationship between credit use and quantity of teff and wheat sold through MPCs.

Table 24: Distribution of farmers by availability of credit and quantity of grain sold through MPCs

Credit Service	Quantity Sold (in quintal)				Total
	None	0.50-2.00	2.01-4.00	4.01-6.00	
Not Use	84(56.00)	32(21.33)	17(11.33)	11(7.33)	144(96.00)
Use	4(2.67)	1(0.67)	0(0.00)	1(0.67)	6(6.00)
Total	88(58.67)	33(2.00)	17(11.33)	12(8.00)	150(100.00)
<i>P-value(0.824)</i>					

Source: computed from surveyed data

4.1.17 Distance of the MPCs from the house hold residence

On average, the respondents should walk 0:39, 0:57 and 4:26 hours to reach to MPCs, local and Woreda market respectively. It was hypothesized that as distance to cooperative increases, the quantity of teff and wheat to be sold may decrease. Truly, the T-test indicated that there was group significant mean difference and there was significant relationship between quantity of teff and wheat sold through MPCs at $P<0.05$ significant level.

Table 25: Distribution of farmers by distance of MPCs and quantity of grain sold through MPCs

Range of distance (Hours)	Quantity Sold (in quintal)				Total
	None	0.50-2.00	2.01-4.00	4.01-6.00	
0.01-0.30	52(34.67)	7(4.67)	10(6.67)	0(0)	69(46)
0.31-1.00	29(19.33)	23(13.33)	7(4.67)	12(8)	71(47.33)
1.01-1.30	6(4)	1(0.67)	0(0)	0(0)	7(4.67)
1.31-2.00	1(0.67)	2(1.33)	0(0)	0(0)	3(2)
Total	88(58.67)	33(22)	17(11.33)	12(8)	150(100)
Mean	0.466	0.736	0.362	0.508	0.517
Std.Deviation	0.4095	0.424	0.290	0.192	0.40
Minimum	0.10				
Maximum	2.00				
T-value(-1.851)					

Source: Computed from survey data

Note: One walking hour is estimated to have equivalent distance with 6kms

4.1.18 Patronage Refund

As economic and social institutions, cooperatives do business to serve interests of members. In the meantime, they may incidentally obtain profit that can be allocated to reserve fund, work expansion, social services and members based on the business participation and owned share capital. Distribution of the net surplus is one of the promotional strategies which encourage members to increase their participation in cooperatives business activities. In 2008/09, 12% of the members did not get patronage refund because out of 4 sample cooperatives, 1 cooperative (Argena MPC) did not distribute net surplus to their members due to organizational problems. The average amount of money distributed to the members as patronage refund was 33 and 38.42 of mean and standard deviations respectively. Statistically, there were significant group mean differences and quantity of grain sold through MPCs and patronage refund has significant relationship at less than $p < 0.001$ level of significance.

Table 26: Distribution of farmers by patronage refund and quantity of grain sold through MPCs

Patronage refund group (Birr)	Quantity Sold (in quintal)				Total
	None	0.5-2.00	2.01-4.00	4.01-6.00	
0(Not gain)	17(11.33)	1(0.67)	0(0)	0(0)	18(12)
0.01-30.00(low)	48(32)	21(14)	6(4)	1(0.67)	76(50.67)
30.01-60.00(Medium)	12(8)	5(3.33)	8(5.33)	2(1.33)	27(18)
60+ (High)	11(7.33)	6(4)	3(2)	9(6)	29(19.33)
Total	88(58.67)	33(2.00)	17(11.33)	12(8.00)	150(100.00)
Mean	25.291	30.398	40.037	87.195	33
Std.Deviation	35.40	34.398	24.98	44.21	38.42
Minimum	0.00(None)				
Maximum	160.40				
Sum	4948.37				
T-value (- 3.00)					

Source: Computed from surveyed data

4.1.19 Access to Market Information

Provision of well-organized market information can gain positive benefits for farmers, marketing agents and policy makers. Up-to-date market information enables farmers to negotiate with marketing agents from a position of greater power. Out of the sample farmers, 42(28%) were not users of market information from different sources such as cooperatives, radio, traders at the local and woreda market levels. Of the total farmers, 40%, 45%, 20% and 3% the respondents have respectively one, two, three and four different sources of market information. Statistically, there has been significant group mean difference and market information has significant relationship with quantity of teff and wheat sold through MPCs at $P < 0.05$ level of significance.

Table 27: Distribution of farmers by source of market information and quantity of grain sold through MPCs

Source of Information	Quantity Sold (in quintal)				Total
	None	0.50-2.00	2.01-4.00	4.01-6.00	
None	35(23.33)	5(3.33)	1(0.67)	1(0.67)	42(28.00)
One source	23(15.33)	13(8.67)	3(2)	1(0.67)	40(2.67)
Two sources	22(14.67)	10(6.67)	9(6)	4(2.67)	45(30)
There sources	6(4)	5(3.33)	4(2.67)	5(3.33)	20(13.33)
Four sources	2(1.33)	0(0)	0(0)	1(0.67)	3(2)
Total	88(58.67)	33(22)	17(11.33)	12(8)	150(100)
Mean	1.06	1.45	1.94	2.33	1.13
Std.Deviation	1.065	0.938	0.827	1.073	1.087
Minimum	0(None)				
Maximum	4				
T-value (- 4.092)					

Source: Computed from survey data

4.1.20 Training on Cooperatives

One of the principal roles of cooperatives is provision of training for members of the cooperative. Trained members could increase their economic participation in the cooperative that ultimately could benefit both of the cooperative and the member himself. However, 90%

of the members do not have access to training on cooperatives for the last two years (2007/08-2008/09). One way ANOVA shows that there was no significant group mean difference and access to training has no significant relationship with quantity of grain sold through MPCs.

Table 28: Distribution of farmers by access to cooperative training and quantity of grain sold through MPCs

Cooperative Training	Quantity Sold (in quintal)				Total
	None	0.50-2.00	2.01-4.00	4.01-6.00	
Not trained	80(53.33)	29(19.33)	16(10.67)	10(6.67)	135(90.00)
Trained	8(5.33)	4(2.67)	1(0.67)	2(1.33)	15(10.00)
Total	88(58.67)	33(22.00)	17(11.33)	12(8.00)	150(100.00)
<i>P-value (0.6295)</i>					

Source: Computed from surveyed data

4.1.21 Cooperative's Purchase Price of grains

Cooperatives are organized to defend the desires of their members from market imperfection. As cooperatives are operating under free market economy, the price of goods and services are determined by market forces of demand and supply. According to the surveyed data, the purchasing price for a quintal of teff and wheat in MPCs was higher (by 33.00 birr and 11 birr) than the price paid for similar units by retailers and wholesalers respectively. However, out of the sample interviewed farmers it was only 23(15.3%) of the respondents understood that the cooperative purchase price was better than competitors price. This implies that though MPCs set better price for a quintal of grain to be purchased, the majority of members of the cooperatives were not provided adequate market information and the existence of under organized marketing mixes. Statistically, there was significant group mean difference in response groups, and cooperative's purchase price has significant relationship with quantity of teff and wheat sold through MPCs.

Table 29: Distribution of farmers by purchase price and quantity of grain sold through MPCs

Average purchase price of MPCs	Quantity Sold (in quintal)				Total
	None	0.50-2.00	2.01-4.00	4.01-6.00	
0.00(None)	88(58.67)	0(0)	0(0)	0(0)	88(58.67)
375-500	0(0)	17(11.33)	9(6)	9(6)	35(23.33)
501-700	0(0)	6(4)	5(3.33)	3(2)	14(9.33)
701-900	0(0)	7(4.67)	2(1.33)	0(0)	9(6)
901-1100	0(0)	3(2)	1(0.67)	0(0)	4(2.67)
Total	88(58.67)	33(22)	17(11.33)	12(24)	150(100)
Mean	0	584.82	535.29	463.09	547.67
Std.Deviation	0	220.325	187.06	220.335	194.824
Minimum	0.00(None)				
Maximum	1000.00				
T-value (-26.409)					

Source: Computed from survey data

4.1.22 Weather Condition

Weather condition is another important factor for grain production. The presence of favorable weather condition could increase production (*ceteris paribus*). Out of the sampled respondents, 77.3% has responded as there was favorable weather condition for grain production in 2008/09. The one way ANOVA shows that there is significant difference in the mean value of response groups of farmers and there exists significant relationship between weather condition and quantity of teff and wheat sold through MPCs at $P < 0.001$ level.

Table 30: Distribution of farmers by weather condition and quantity of grain sold through MPCs

weather condition	Quantity Sold (in quintal)				Total
	None	0.50-2.00	2.01-4.00	4.01-6.00	
Unfavorable	13(8.67)	10(6.67)	6(4)	5(3.33)	34(22.67)
Favorable	75(50)	23(15.33)	11(7.33)	7(4.67)	116(77.33)
Total	88(58.67)	33(22)	17(11.33)	12(8)	150(100)
<i>P-value (0.0070)</i>					

Source: Computed from surveyed data

4.1.23 Corruption on Cooperatives Properties

Cooperatives utilize high amount of money in their business operations. As a matter of rules and regulations, assets of the cooperatives are running by those who are elected to lead the cooperatives business. However, some of the elected leaders of the cooperatives did some faults with respect to cash and other assets of the cooperatives. Hence, corruption becomes critical problems that contribute a negative effect on volume of sales of cooperatives. Out of the total sampled farmers, 68 (45.3%) respondents described that they were informed on the incidence of embezzlements of the cooperative property by the management committee and employees specifically by the cashiers, store keepers, purchasers. Statistically, there was no significant relationship between corruption and quantity of teff and wheat sold through MPCs.

Table 31: Distribution of farmers by corruption on cooperative property and quantity of grain sold through MPCs

Prevalence of corruption	Quantity Sold (in quintal)				Total
	None	0.50-2.00	2.01-4.00	4.01-6.00	
Not informed	47(31.33)	19(12.67)	8(5.33)	8(5.33)	82(54.67)
Informed	41(27.33)	14(9.33)	9(6.00)	4(2.67)	68(45.33)
Total	88(58.67)	33(22)	17(11.33)	12(8.00)	150(100)
<i>p-value(0.591)</i>					

Source: Computed from survey data

4.1.24 Qualified cooperative employees

Cooperative business needs an efficient and effective service to satisfy their users. As to the survey, sample cooperatives have accountants who are above the 10th grade in their educational status. However, those employees who are directed to purchase and sell grains were not found to have formal education. Rather, they are part-time workers and could only read and write. Out of the total respondents, 61.33% were not satisfied by the services rendered by these employees. The one way ANOVA also showed that the significant portion of the respondents were not satisfied but there was significant relationship between qualified employees and quantity of teff and wheat sold through MPCs (*at $P < 0.05$ level*).

Table 32: Distribution of by qualified employees and quantity of grain sold through MPCs

employees group	Quantity Sold (in quintal)				Total
	None	0.50-2.00	2.01-4.00	4.01-6.00	
Not satisfied	47(31.33)	25(16.67)	9(6)	11(7.33)	92(61.33)
satisfied	41(27.33)	8(5.33)	8(5.33)	1(0.67)	58(38.67)
Total	88(58.67)	33(22)	17(11.33)	12(8)	150(100)
<i>p- (0.0295)</i>					

Source: computed from survey data

4.1.25 Grain Purchase period of Multipurpose Cooperatives

Multipurpose cooperatives are intended to create marketing opportunity for their members. Management committee of the cooperatives usually set the grain purchasing period at the days of the months when farmers are not working their farm works. As the stores of the cooperatives didn't get opened daily, those members who were ready to sell their produces for their immediate cash needs were unable to sell to their cooperatives. However, the one way ANOVA test showed that the significant portion of the respondents perceived that the purchase period of cooperatives was convenient and there exists significant relationship

between cooperative purchase period and quantity of grain sold through MPCs (at $P < 0.05$ level of significance).

Table 33: Distribution of farmers by cooperative purchase period and quantity of grain sold through MPCs

purchase period	Quantity Sold (in quintal)				Total
	None	0.50-2.00	2.01-4.00	4.01-6.00	
Not Convenient	65(43.33)	19(12.67)	8(5.33)	4(2.67)	96(64)
Convenient	23(15.33)	14(9.33)	9(6)	8(5.33)	54(36)
Total	88(58.67)	33(22)	17(11.33)	12(8)	150(100)
<i>P-value(0.0021)</i>					

Source: computed from the survey data

4.1.26 Storage capacity of Multipurpose Cooperatives

Storage is one of the key factors for the successful business operation of cooperatives. Several cooperatives in the studied woreda have no sufficient storage to operate quite a lot of businesses at the same time. It was hypothesized that whenever members believe that their respective cooperatives have no sufficient storage to purchase their produces, they could not deliver their produce to the MPCs. However, the one way ANOVA test showed that there is significant difference in the mean value of responses on cooperative storage capacity and the significant portion of the respondents (85.5%) perceived that the storage capacity was not sufficient and there existed significant relationship between cooperative storage capacity and quantity of teff and wheat sold through MPCs (at $P < 0.05$ level of significance).

Table 34: Distribution of farmers by coop. storage capacity and quantity of grain sold through MPCs

storage capacity	Quantity Sold (in quintal)				Total
	None	0.50-2.00	2.01-4.00	4.01-6.00	
not sufficient	71(47.33)	29(19.33)	16(10.67)	12(8.00)	128(85.33)
sufficient	17(11.33)	4(2.67)	1(0.67)	0(0.67)	22(14.67)
Total	88(58.67)	33(22.00)	17(11.33)	12(8.00)	150(100.00)
<i>P-(0.03)</i>					

Source: computed from the survey data, 2010

4.2 Factors influencing quantity of teff and wheat sold through MPCs

Multiple linear regression econometric model has been employed to analyze the factors influencing the quantity of teff and wheat to be sold through multipurpose cooperatives. The statistical package for social science (SPSS version 15) was employed to compute and estimate the effect or impact of a given explanatory variable (Citrus paribus) on variation in the dependent variable.

Several socio-economic factors were expected to influence the sales volume of teff and wheat through cooperatives and 15 variables were hypothesized to affect the grain marketing decision of respondents. Out of these explanatory variables 5 explanatory variables were removed by their highly insignificant nature shown in the model. The rest 10 explanatory variables selected and entered the regression model for analysis by testing their relative contribution to the regression mode:

F-test in the ANOVA table was applied to judge whether the explanatory variables adequately explained the outcome variable (R^2) in the model. Significant **F** indicates the existence of linear relationship between Y and at least one of the X's.

T-test was applied to each individual explanatory variable that significant **t** indicates whether the explanatory variable has an effect on outcome variable while controlling for other X's.

The dependent variable is quantity of teff and wheat sold through MPCs (QUAN.SOLD)

The independent variables are: purchase price of MPCs (COOP.PRC), family size (FAM.SIZE), duration of membership (DUR.MEM), patronage refund (PAT.REF), distance of the MPCs (DISTANCE), level of education (EDUCTN), access sources to market information (ACC.MR.INF), corruption(COURRUPTION), qualified employees(QUL.EMP),purchase period(PUR.PER).

As a result, the regression equation was developed into;

$$QUAN.SOLD = \beta_0 + \beta_1 COOP.PRC + \beta_2 FAM.SIZE + + \beta_{10} PUR.PER + E$$

Table 35: Model Summary of the regression

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.778 ^a	.605	.574	1.09756

a. Predictors: (Constant), Corruptions, Distance of the cooperative from house hold residence, Duration of membership, Level of education of house hold head, Access to information, Patronage refund, Family size, Qualified employees, Purchase period, Average purchase price of coops

Table 36: ANOVA of the model

		Sum of Squares	df	Mean Square	F	Sig.
Model 1	Regression	255.103	11	23.191	19.252	.000 ^a
	Residual	166.240	138	1.205		
	Total	421.342	149			

a. Predictors: (Constant), Corruptions, Distance of the cooperative from house hold residence, Duration of membership, Level of education of house hold head, Access to information, Patronage refund, Family size, Qualified employees, Purchase period, Average purchase price of coops

b. Dependent Variable: Quantity of teff and wheat sold through MPCs

Table 37: Coefficients of the regression

		Coefficients	t	Sig.
Model 1	(Constant)	.229	.683	.496
	Average purchase price of coops	.368	4.987	.000**
	Family size	-.062	-1.069	.287
	Duration of membership	.071	1.217	.226
	Patronage refund	.316	5.600	.000**
	Distance of the cooperative from house hold residence	-.149	-2.627	.010*
	Level of education of house hold head	.210	2.951	.004**
	Access to information	.143	2.469	.015*
	Qualified employees	.122	-2.131	.035*
	Corruption	-.057	-1.044	.298
	Purchase period	.053	.902	.369
<p>(a) Dependent Variable: quantity of teff and wheat sold through MPCs.</p> <p>The significant model emerged at(F_{11,138}), p<0.0001</p> <p>Adjusted R square(R²)=0.574</p> <p>Note : ** and * significant at less than 0.0001 and 0.05 level respectively</p>				

As shown from table 37, six (6) explanatory variables were found to significantly affect the quantity of teff and wheat sold through MPCs at different levels of significance. Those variables which have significant relationship with the quantity of teff and wheat sold through multipurpose cooperatives were: the average cooperative purchase price (COOP.PRC), patronage refund (PAT.REF), distance of the MPCs from the house hold residence (DISTANCE), level of education(EDCTN) access to sources of market information (ACC.MR.INF) , qualified employees(QUL.EMP).

Cooperative's Purchase Price of teff and wheat (COOP.PRC): has significant relationship with quantity of teff and wheat sold through MPCs (*at p < 0.001 level*) and influenced the quantity of teff and wheat sold through multipurpose cooperatives positively. Those cooperatives that paid similar or better price to produces of farmers as compared with other

marketing agents could increase the probability of members' sales volume of teff and wheat by 36.8 %. This indicates that cooperatives have to pay more competitive price to the members in order to attract more volume of sales and safeguard the member's interest.

Patronage refund (PAT.REF): has significant relationship with quantity of teff and wheat sold through MPCs (*at $p < 0.001$ level*) and influenced grain sales volumes sold through MPCs positively. This indicates that as cooperatives distributed patronage refund to the members increase on periodic basis, the probability of members' sales volume of teff and wheat sold through cooperative increase by 31.6% that encouraged members to participate in grain marketing through multipurpose cooperatives. Accordingly, all of the MPCs have to distribute patronage refund on the basis of their bylaws.

Distances of the MPCs from the house hold residence (DISTANCE): has significant relationship with quantity of teff and wheat sold through MPCs (*at $p < 0.05$ level*) and negatively influenced the grain sales volume sold through multipurpose cooperative. The result shows that a one unit (hour) increase in distance of the cooperative from the household residence would result 15% decrease in quantity of teff and wheat sold through multipurpose cooperatives. Therefore, location of cooperative stores should be more nearer to the house hold residence by opening branch stores and recruit qualified purchasers.

Level of education of house hold head: has significant relationship with quantity of grain (teff and wheat) sold through MPCs (*at $p < 0.05$ level*) and positively influenced the sales volumes sold through multipurpose cooperatives. As members' level of education increase by one unit (grade), the probability of increment in quantity of grain sold through cooperatives also increase by 21%. As a result, cooperatives ought to mobilize those farmers who have good performance in formal schooling to increase their sales volume and grain marketing share.

Access to market information (ACC.MR.INF): has significant relationship with quantity of teff and wheat sold through MPCs (*at $p < 0.05$ level*) and positively influenced the grain sales volume sold through MPCs. As the source of adequate market information increases by one additional source, the quantity of grain sold through MPCs increases by 14.3%. Therefore, provision of up-to-date market information for members and MPCs needs to be strengthened by all stakeholders.

The presence qualified employees: has significant relationship with quantity of teff and wheat sold through MPCs (*at $p < 0.05$ level*) and positively influenced the grain sales volume sold through MPCs. As qualified employees are recruited in the cooperatives and able to operate the grain marketing business the quantity of grain sold through MPCs could increase by 12.2%. Therefore, the grain marketing activity of the cooperatives should be operated by well trained cooperative employees to increase the sales volume.

4.3 The Grain marketing Role of MPCs as discussed by focus groups

Three of the focus group discussions conducted by groups consisting of 12 cooperative leaders who were responsible for the leadership role of cooperative, 7 cooperative extension workers who were responsible for the promotion of rural cooperatives (one for three rural cooperatives), and 9 woreda cooperative promoters and marketing experts who were responsible for the promotion of cooperatives and enhancing their business transaction were assigned to evaluate the grain marketing role of multipurpose cooperatives in their discussion by using a check list .

Most of the members in the focus-group discussion expressed their feeling that the majority of the existing cooperatives in the woreda emerged in the Derge regime, after the 1974 revolution. Those cooperatives organized since then were directed for the party-line of socialist ideology in the rural area. Members were not in a position to participate in the affairs

of cooperatives on the basis of their free will; rather, members created misconception on the roles of cooperatives. This happening on the cooperative put its bad reflection on the performance of today's multipurpose cooperatives.

Figure 4 : Focus Group discussion by Woreda Coop. Promoters and Experts (January, 2010)



Source: own survey data

Having understood this, The Federal Government of Ethiopia declared a new cooperative proclamation (147/98). As a result, the majority of multipurpose cooperatives in the woreda were transferred to share holding system. This gives a legal basis for multipurpose cooperatives to participate in business activity. According to the proclamation (147/98) multipurpose cooperatives are functioning for the following major objectives:

- To solve problems collectively, which members can not individually achieve;
- To achieve a better result by coordinating their knowledge, wealth and labor;
- To promote self-reliance among members; to collectively protect, withstand and solve economic problems;
- To improve the living standards of members by reducing production and service costs by providing input or service at a minimum cost or by finding a better price to their products or services;

- To expand the mechanism by which technical knowledge could be put in to practice; to develop and promote savings and credit services;
- To minimize and reduce the individual impact of risks and uncertainties;
- To develop the social and economic culture of the members through education and training

They are expected to carry out the following activities to attain their objectives: Marketing of chemical fertilizers, hybrid varieties of seeds, quality farm implements at fair price, provision of agricultural credit to the members, provision of storage facilities, marketing of members' agricultural produces, supply of consumer goods like sugar, coffee and other basic necessities, operating flour milling for grinding of food grains and other spices for both members and non-members.

Special roles of MPCs in grain marketing

All the participants of focus-group discussants agreed that multipurpose cooperatives are marching towards responsive atmosphere for more production, productivity and employment generation so that the livelihood of farmers could be improved. For this reasons, MPCs have roles that could not be made by other institutions.

- MPCs are organizations found in adjacent parts of the members' residence which enables the members to save time and labor related to marketing activities;
- Protect members from any market failure and imperfections practiced by some marketing actors mainly on the main grain harvest and marketing seasons of the year;
- Pay better price for producers by selling their produces in collective manner to bargain in the market competition;
- Derive economies of large scale operation that will reduce cost of operation as volume of grain marketing business increase;

- Increase production and productivity of grain by supplying agricultural inputs which enable the house hold to bring producers surplus and maintain food security;
- Benefit members who actively participate in grain marketing through cooperatives by providing patronage refund

What went wrong with grain marketing role of MPCs?

Agreed on that multipurpose cooperatives have multiple objectives in marketing of members' produces specifically teff and wheat, the focus-group participants thoroughly discussed the reasons why such weak performance in grain marketing (<2%) was attained and what bottlenecks tackled the desired objectives. Given that members are the owners, users and controllers of cooperatives, those elected leaders (management and control committees) by members performed very low in planning, leading and controlling of the grain marketing activities of the MPCs. This was mainly due to low commitments to spending additional time on cooperative meetings and decision makings. In most of the MPCs, management committees were having meetings once in a weak in unscheduled manner and absence of the majority of the leaders. As a result, there were no timely decision makings. Moreover, in all of the sampled cooperatives, there are no full time cooperative managers to perform the managerial duties and responsibilities. As a result,

- ✓ There was no timely pricing for a quintal of teff and wheat to be purchased and sold, poor cash administration creates shortage of money to purchase the required quantity;
- ✓ In some of the cooperative there has been delayed payment system for the grain sellers due to poor cash shortage. This was a disappointing activity for grain sellers who have immediate cash needs;
- ✓ The market information system was very weak, untimely, unorganized, slowly disseminated to users;

- ✓ Unable to take timely corrective measures against any undue practices like undue weight deduction from sellers during sales, purchasing of inferior quality grain and adulteration of the right quality teff and wheat by any other substances, hoarding of the purchased grain for several months, and low capital turn over that resulted shortage of capital;
- ✓ Cooperative purchasers open cooperative stores to buy teff and wheat averagely for 10 days in a month while, retailers and wholesalers are full-time workers in grain marketing;
- ✓ Cooperatives get in touch with market information for 8 days in a month while, daily in retailers and wholesalers. Wholesalers and retailers are located in all and nearby villages of cooperative stores which resulted stiff competition with MPCs;
- ✓ The level of members' understanding on the affairs of cooperatives especially in grain marketing was seriously affected by the malpractice against cooperation done by the Derge regime. Some members are not optimistic and willing to consider the future success of cooperative grain marketing business. As a result, they are not ready to sell their grains through cooperatives;
- ✓ Untrained and weakly disciplined purchasers were one of the key problems in the grain marketing activities of cooperatives. None of the MPCs purchasers were able to attain formal schooling except reading and writing. These people were not adequately trained on the basis of cooperative marketing; some of them were dishonored in reducing the actual weight at the time of purchase. Some of the purchasers were also main actors in adulterating the right quality by unwanted substances.

Grain marketing channel, actors& their share in the Woreda

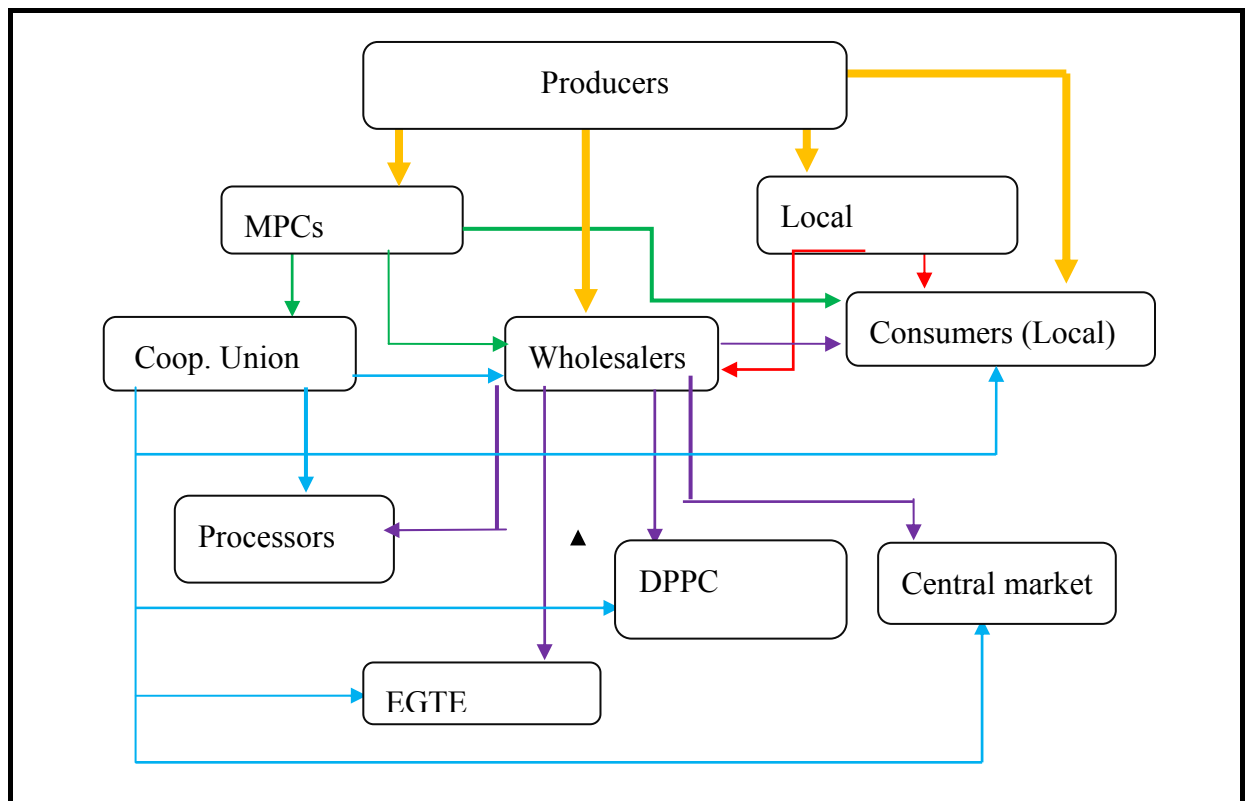
A closer look at the key actors and their interactions in markets provide a better idea about grain marketing performance. Grain marketing participants consist of different actors like

local assemblers/collectors, wholesalers, cooperatives and consumers, government agencies (EGTE, DPPC) and flour mill factories.

Local assemblers: are traders or part-time traders in assembly markets who collect surplus output from farmers at the farm-gate, from village markets, or from market towns. Collectors, who are commonly found in the grain marketing, are locally-licensed traders who typically transfer their purchases to wholesalers.

Grain wholesalers: are the main grain marketing actors who purchase grain from the farmers, assemblers, primary cooperatives, and cooperative unions and sell their purchased grain to the central markets, DPPC (Disaster Prevention and Preparedness Commission), Ethiopian Grain Traders Enterprise (EGTE), flour mill factories, consumers and other agents.

Figure 5: Grain marketing channel



Source: Constructed from own Data

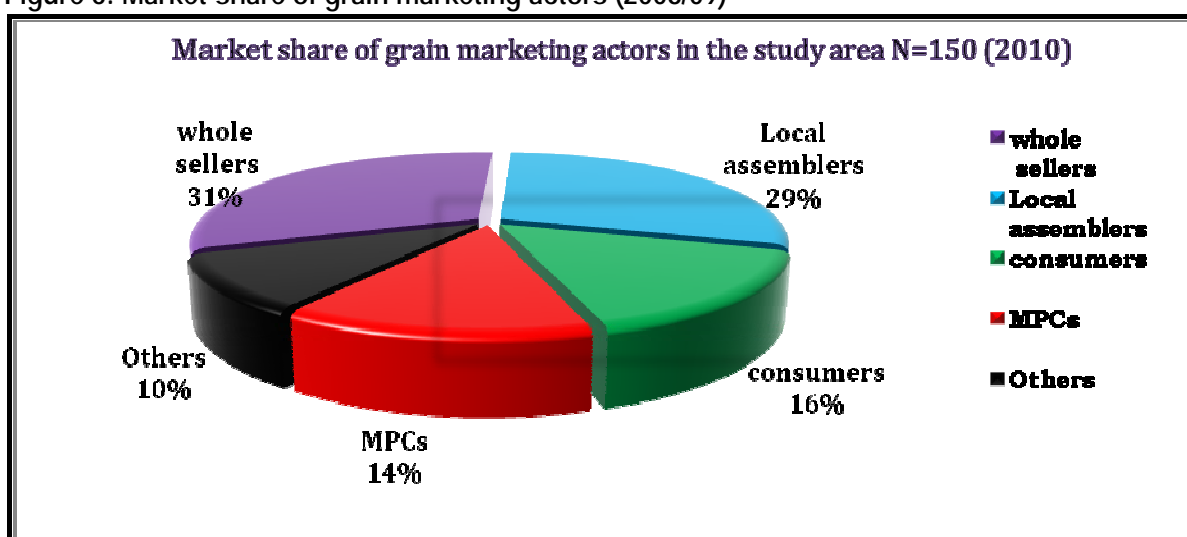
Processors: Processors include grain mills, or value-adding enterprises that are owned either by private individuals who process grain for onward distribution to intermediary or consumer markets.

Primary cooperatives and cooperative union: Cooperatives are involved in grain marketing activities by collecting, and wholesaling members' produces. However, the marketing share of cooperatives was very low.

Government agencies: some government agencies were involved in marketing of grains. Among these agencies, EGTE and DPPC were involved in grain marketing.

Grain marketing has several actors for their own sake. The surveyed data result shows that 31%, 29%, 16%, 14% & 10% was the market share of wholesalers, local assemblers, consumer, MPCs and others(unidentified actors) respectively. From this result, we can understand that the share of MPCs in grain marketing is very low as compared to other marketing actors.

Figure 6: Market-share of grain marketing actors (2008/09)



Source: survey data

Table 38: Market- share of main grain marketing actors (2008/09)

Types of grains	Quantity sold (Qt)					
	Wholesalers	Local assemblers	MPCs	Consumer	others	Total
Teff	50	92	26.73	74	16.5	259.23
Wheat	316.5	245	138.3	106	100	905.8
Total	366.5	337	165.5	180	116.5	1165.5

Source: computed from survey data

4.4 Suggestion of Farmers to improve Grain marketing Performance of MPCs

Given that the market-share and performance of MPCs were really weak, sampled farmers identified the key success factors and their degree of relevance for the improvement of grain marketing through multipurpose cooperatives. The majority (90%) of the respondents agreed that setting of periodical and better purchase price for a quintal of grain was very important factor for the success of cooperative grain marketing whereas periodical distribution of patronage refund was very importantly recommend by 51% of the respondents. On the other hand, developing member's awareness about the advantages of grain marketing through MPCs was recommended by 47 % of the respondents. Some of the respondents (45%) suggested that setting suitable purchase period and creating strong marketing integration with Gozamn Union are important points for the success of grain marketing business. On the other hand, 37% of the respondents have suggested that provision of adequate market information is vital for the improvement of grain marketing performance of cooperatives (*see table 39*).

Table 39: Summary of Suggestion of farmers to improve grain marketing performance of MPCs

S/No	Parameters(Indicators)	Very Important (3)		Important (2)		Less Important (1)	
		Response	Rank	Response	Rank	Response	Rank
1	Setting of periodical and better purchase price for a quintal of grains	135(90)	1	5(3)	8	0(0)	-
2	Suitable purchase period and time schedule	67(45)	3	21(14)	3	6(4)	1
3	Assign full time qualified purchasers in the main grain harvest seasons	45(30)	5	6(4)	7	5(3)	2
4	Develop members awareness about the advantages of grain marketing through MPCs	71(47)	2	11(0)	5	0(0)	-
5	Create strong grain marketing integration of MPCs and Gozamn union	67(45)	3	7(5)	6	0(0)	-
6	Provide Up-to-date Market information to members	55(37)	4	28(19)	1	4(3)	3
7	The need to all weather Road and transport facility	36(24)	6	3(2)	9	0(0)	-
8	Periodical distribution of patronage refund	76(51)	7	25(17)	2	0(0)	-
9	Protect undue weight deduction during purchase of grain by MPCs purchasers	23(15)	8	14(9)	4	0(0)	-

Source: survey data 2010

4.5 Problems of MPCs in Grain (Teff and Wheat) Marketing

Multipurpose cooperatives have been performing various marketing activities for the benefit of members in particular and the society in general. But, there are several problems which hinder their growth and underestimate their roles. From the field investigation, focus-group discussion and secondary data sources, the major problems can be summarized as follows.

Inefficient cooperative leadership: Leaders of the cooperatives are responsible for the overall marketing performance and management of cooperatives and satisfaction of members.

All cooperatives are managed by management committee who are mostly illiterate or found at very low level of education. This has resulted in poor understanding about the modern cooperative business. Only 4 % of the respondents have participated in cooperative leadership (*see table 23 above*). Cooperative leaders were not in a position to recruit managers and delegate power. As a result, MPCs were unable to compete in grain marketing and mismanagement of cooperative property and corruption become distinctive features of the organizations. From the respondents, 52(34.67%) agreed on the existence of weak leadership in the cooperative.

Lack of all weather road and transportation: Most cooperatives are found in rural area where there are no all weather roads. As a result, there is no adequate transport service which in turn hinders the marketing produces. Accordingly, the responses of 73% sample respondents show that there was lack of all weather roads and transportation which further restricted farmers to use only local markets as their major marketing place.

Lack of Capital: focus-group participant leaders, extension workers, promoters and 26 (17.3% of the) sample farmers agreed that lack of capital was one of the major problems ingrain marketing activities. The suggested reasons for shortage of capital were unwillingness of banks to provide credit due to heavy collateral requirements and previous poor loan repayment performance of the previous producer and service cooperative in the Derge regime, poor capital formation system by selling additional shares, and the inability of the government to finance the cooperatives to meet the needs of immediate cash need of members who are ready to sell their produces to multipurpose cooperatives.

Lack of up-to-date market information: Obviously, our world is under the era of information and communication revolution. As a result, market information plays a vital role to monitor the marketing mix. Unless marketing information system is well developed, it will

be difficult for cooperatives to buy and sell at the right price, place, and time. Generally, cooperatives have no information on the current grain prices, market demand and supply of grain. Accordingly, 28% of the sample farmers replied that lack of reliable marketing information was critical problem in cooperative marketing.

Lack of storage facilities: Most of the cooperative's storages are old, poorly designed and handled so that it would have an impact on the quality and amount of grains to be purchased at a time. Storage losses due to the insufficiency and poor quality of storage facilities were enormous. All focus-group participants and 6.67% of the sample farmers justified that lack of storage was one of the major problems in cooperative marketing.

Disintegrated and weak institutional supports: The cooperative marketing section was given to agricultural inputs and marketing work process by diverging from cooperative promotion work process by BPR (Business Process Reengineering). This form of reorganization creates real problem in the support and supervision of cooperatives as one entity. There is a genuine effort made by government in assigning one cooperative extension worker to three rural cooperatives in the woreda. However, these cooperative extension workers were not getting training on the issues of cooperatives after they are recruited.

Poor marketing linkage between MPCs and Gozamn union: Gozamn union was organized by its 27 affiliates to overcome the marketing problem in 2000. The union has tried to create better marketing opportunity in collecting the produces purchased by its members. However, problems have been seen in the process and way of delivery of the produces purchased by the member cooperatives. No clear and binding agreement among the union and its affiliate with regard to quality of the produces to be purchased, unscheduled means of receiving and delivering of the produces and no-clear-cut announcement of selling price and profit margin have been made by the union.

Inefficient cooperative employees: The grain marketing services provided by the purchasers and accountants have not been efficient to attract members. The grain transaction was not recorded on timely basis; undue weight deduction at the time of purchase and sale was another major problem in the MPCs activities. The majority of the focus-group participants and 61% of farmers responded that they were not satisfied in grain marketing services of the MPCs delivered by the cooperative employees.

Low level of member's awareness & participation: So much has been said about the members of the cooperatives as they are the users, the owners, the controllers of their organizations. However, 28% and 31% of the respondents did not participate in cooperative meetings because of unwillingness to participate and being uninformed about the meetings respectively.

Misappropriation and corruption on cooperative property: is one of the critical problems in the day- to-day business operation of cooperatives. Some of the respondent farmers (45%) replied that they were not familiar with the prevalence of corruption in their cooperatives. However, those 44%, 24%, 17% and 10 % respondents were informed about the occurrence of corruption on their cooperatives by the cashiers, sellers, store-keepers and purchasers respectively. On the other hand audit reports of the woreda agriculture and rural development office of the woreda (2009) shows that the prevalence of misappropriations and embezzlement of cooperative assets increased than ever been in the previous years.

CHAPTER FIVE

CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusions

Agricultural multipurpose cooperatives do have prominent roles in the agricultural sector of the national economy and are supposed to improve the grain marketing system thereby promoting agricultural development in the rural area. They are also organized to render economic benefits such as economies of scale, market power, risk pooling, coordination of demand and supply, and guaranteed access to input and output markets to the member patrons. The objectives of the study were:

1. To assess the role of grain marketing by multipurpose cooperatives,
2. To identify marketing actors and their roles in grain marketing,
3. To analyze factors influencing member's grain sales volume through the MPCs, and
4. To devise strategies for the improvement of grain marketing performance of MPCs.

The T-test showed that there was significant mean difference in the cooperative purchase price of teff and wheat (at $P < 0.001$), patronage refund (at $P < 0.001$), distance of the cooperative (at $P < 0.05$), fertilizer use (at $P < 0.1$), farming experience (at $P < 0.05$), and access to market information (at $P < 0.05$) between groups.

One way ANOVA test also shows that explanatory variable like qualified employees, purchase period, weather condition and cooperative storage capacity have significant mean value differences between response groups (at $p < 0.05$).

The Multiple linear regression model result revealed that among 10 explanatory variables included in the model, six explanatory variables were found to be significant at less than 0.05 and 0.1 probability level. More specifically, these variables include cooperative purchase price, patronage refund, distance of the multipurpose cooperative from the household residence, access to market information, the presence of qualified employees and level of education were found to be significantly affecting the quantity of grain sold through cooperatives. Among these significant variables cooperative purchase price, patronage refund, access to market information, the presence of qualified employees and level of education have positively relationship with quantity of grain sold through multipurpose cooperatives. On the other hand, distance of the multipurpose cooperative from the household residence has negative relationship with quantity of grain sold through multipurpose cooperatives. In this study, major problems that affect the volume of grain marketed through multipurpose cooperatives were lack of training to members, lack of qualified employees, shortage of capital, inability to pay patronage refund to members, corruption of cooperative assets, low level of members' participation, lack of up-to-date market information, and corruption of cooperative leaders are among the others.

The result of focus group discussants also shows that though constrained by several bottlenecks, MPCs have vital role in reducing time and cost of transaction with related to grain marketing activities of cooperative members.

Multipurpose cooperative of the study woreda have small share in grain marketing activities specifically teff and wheat compared to other marketing actors of grain like whole sellers and retailers.

5.2 Recommendations

Based on the results of study, the following issues are forwarded to improve the roles and performance of multipurpose cooperatives in grain marketing the following recommendations are suggested to improve the performance of MPCs in grain marketing activities:

1. It is highly important to raise the technical competence of cooperative management committee, employees, and woreda and zone cooperative promoters so as to give an efficient support for the growing cooperative sector. So these people are to be trained.
2. Based on reports of the (WA&RDO, 2009) the prevalence of corruption has become the real bottleneck of today's cooperatives mainly due to weak internal control, unskilled and uncommitted management committee and weak institutional and legal (judicial) supports. Unless and otherwise these prevalence of corruption and misuse on cooperative money and total asset are challenged in better ways by strengthening the internal control of the cooperatives, creating awareness of members and leaders about the risk that is facing the cooperatives, penalizing those who is having vested interest and taken the cooperative assets on timely basis through the legal(judicial) system, the researcher feels that no more fruit will be grown and harvested from the cooperative firm and cooperatives couldn't be one of the growth pillar in the rural development efforts of the country.
3. The need to create strong grain marketing integration to Gozamn Union is another key factor for the success of cooperatives grain marketing business. The weak marketing linkage needs to be changed by value addition, grading and standardization of grains for the benefit of producers, multipurpose cooperatives, and the union. The efforts made by the union to train management committees and cooperative employees are advised to extend to cooperative members and the zonal and regional cooperatives

promotion agencies should have to strengthen the efforts of the union through financial and technical supports.

4. From the very important constraints specifically identified by the respondents, one multipurpose cooperative (Argena) was unable to pay patronage dividend to members. This was due to reorganization problems of the cooperative to be transferred to share holding system based on proclamation 147/98. Therefore, multipurpose cooperatives ought to be reorganized and participate in grain marketing that allows distribution of patronage dividend to their member patrons.
5. Provision of education and training is one of the incorporated principles in the cooperative proclamation 147/98. The survey result shows that lack of training and education to members and board of directors is one of the very prominent problems identified by the members. Therefore, as members are the pillars of the cooperatives, due attention needs to be given by the governmental and non governmental organizations for members' awareness creation through the allocation of the required budget.
6. One of the major constraints of the grain marketing activity of the cooperatives is lack of professional management. This shows that cooperative members are aware of the importance of the professional management. Therefore, the cooperative management committee and the cooperative promoters are expected to take appropriate action in hiring professional managers depending on the financial capacity of the cooperatives in order to increase the grain marketing services and members satisfaction.
7. Cooperatives are responsible for providing diverse services based on the desires of members. In practice, most of the MPCs business activities are restricted to grain marketing and provision of input delivery of consumer goods. Nevertheless, there are

other services required by members like flour mill, oil processing mills, farm implements.

8. The study shows that the financial position of cooperatives was not as such strong. Hence, it needs to be improved through buying additional share capital, retained earnings, revising the credit provision policy of financial institutions. Governmental and non-governmental organizations as well as cooperatives themselves ought to improve the marketing infrastructures such as the transportation, storage and communication facilities.
9. Up-to-date and reliable marketing information are supposed to be provided for members and cooperatives regularly using different ways like telephone, local radio and notice boards to enhance their bargaining power and decision making capacity.

5.3 Implication for future research

1. This study was on the role of multipurpose cooperatives in grain (teff and wheat) marketing in Gozamn Woreda, Amhara Regional State. So, it is suggested to conduct similar studies in the other parts of the region on such and other grains (like oilseed and maize). Therefore, further studies on these business activities could be conducted to suggest the possible solutions for improving the entire marketing performance of cooperatives.
2. A study on internal control and management system of cooperatives could be conducted to recommend the possible ways for efficient utilization of the financial and managerial resources for the improvement of the overall performance of cooperatives.

REFERENCES

- Agresti, A. (2002). *Categorical Data Analysis (2nd ed.)*. New Jersey: John Wiley & sons, Inc.
- Alema Woldemariam (2008). *Analysis of the Role of Cooperatives in Agricultural Input and Output Marketing in Southern Zone of Tigray*, Mekelle University, M.Sc Thesis (unpublished).
- Amhara Region Cooperative Promotion Agency (2008), Annual reports, Bahirdar.
- Asfaw Negassa & Jayne, T.S.(1997). *The Response of Ethiopian Grain Markets to Liberalization*, Working paper on grain market research project, Ministry of Economic Development and Cooperation, Addis Ababa.
- Asfaw Negassa (1998). *Vertical and Spatial Integration of Grain Markets in Ethiopia: Implications for grain market and food security policies*, working paper on grain market research project, Ministry of Economic Development and Cooperation , Addis Ababa.
- Belete Alem (2008). *A Study on Maize Marketing Performance of Damot Multipurpose Farmers' Cooperatives Union and its Affiliates*, Amhara Region, Mekelle University, M.Sc Thesis (unpublished).
- Berhanu G. &Hoekstra, D. (2008). *Market Orientation of Smallholders in Selected grains in Ethiopia: Implications for Enhancing Commercial Transformation of Subsistence Agriculture*, IPMS (Improving Productivity and Market Success) of Ethiopian Farmers Project Working Paper, ILRI (International Livestock Research Institute), Nairobi.

- Bernard, T. and Spielman, D. (2008). Mobilizing Rural Institutions for Sustainable Livelihoods and Equitable Development: *A Case Study of Agricultural Marketing and Smallholder Cooperatives in Ethiopia*, International Food Policy Research Institute, Addis Ababa.
- Bezabih Emana (2009). ILO Coop Africa Working Paper: *Role of Cooperatives in Ethiopia*, Addis Ababa.
- Birchall, J. (2003). Rediscovering the Cooperative Advantage in Poverty Reduction through Self-help, Cooperative Branch International Labour Office, Geneva.
- BoFED (2003, 2008). Development Indicators of Amhara Region, Bahirdar, Ethiopia.
- Brewer A. (2008). The Concept of an Agricultural Surplus: *From Petty to Smith*, Discussion Paper, Department of Economics, University of Bristol.
- Brown, J. W (2004). Techniques of multivariate data analysis: *a student reader*.
- Cambridge University Press (2003), <http://www.dictionary.cambridge.org>.
- Cote, D. and Carre, G. (1996). Profile of Agricultural Co-operation throughout the World: *Review of International Co-operation (ICA)*, Vol.89, Geneva.
- Central Statistics Agency (2008): Statistical Report of the 2007 Population and Housing Census Results. Addis Ababa, Ethiopia.
- CSA (2006). Agricultural Sample Survey: *Report on Area and production of crops (private peasant holdings, meher season)*. Addis Ababa, Ethiopia.
- CSA (2008). Agricultural sample survey: *Report on Area and production of crops (private peasant holdings, meher season)*. Addis Ababa.

- Develtere, P., Pollet I. & Wanyama F. (2008). Cooperative out of poverty: *The Renaissance of the African Cooperative movement*. International Labor office.
- Eleni G., Alemayehu S., Taffesse and Bernard T., (2007). *Small holders Commercialization through Cooperatives*. A Diagnostic for Ethiopia: Discussion Paper of International Food Policy Research Institute International Food Policy Research Institute African Centre for Economic and Historical Studies.
- Eleni G. (2001). Market Institutions, Transaction Costs, and Social Capital in Ethiopia: Grain Market research report international food policy research institute Washington, D.C.
- Evaluation of Agricultural Cooperatives in Ethiopia (ACE, 2005). Program Activities for USAID/Ethiopia, Washington, D.C.
- Evans L. & Meade R. (2005). The Role and Significance of Cooperatives in New Zealand Agriculture: A comparative Institutional Analysis.
- Francesconi, G.N. (2009). Cooperation for competition: *linking Ethiopian Farmers to markets*, PhD thesis, Wageningen University.
- Gebremeskel D., Jayne T.S., Shaffer D. (1998). Grain Market Research Project Working paper: *Market Structure, Conduct, and Performance of Ethiopia*, Ministry of Economic Development and Cooperation, Addis Ababa.
- Girma T., Tadesse A. and Seid Y. (2004). Agricultural development efforts and lessons of a decade in the Amhara national regional state, Bahirdar.
- Hanson, L. (2002). Cooperatives in Agribusiness: Education Specialist, Education and Member Relations, Rural Business-Cooperative Service U.S. Department of Agriculture Cooperative Information Report.

- International Cooperatives Alliance. (2006). *Statement on the Cooperative Identity*. Geneva,
- Jayne, T.S., Chapoto, A. & Govereh J. (2007). Grain Marketing Policy at the crossroads: *Challenges for Eastern and Southern Africa Draft version*: Paper prepared for the FAO workshop on “Staple Food Trade and Market Policy Options for promoting Development in Eastern and Southern Africa”, FAO Headquarters, Rome, Italy
- Kotler, P. & Armstrong G. (2006). Principles of Marketing, (11th ed.), North West university and university of North Carolina, published in (N.C.R. Delhi).
- Maddala (1992). Introduction to Econometrics (2nd ed.), J. Wiley and Sons. Inc.
- Ministry of Information of the Government of Federal Democratic Republic of Ethiopian (1994 EC). Rural development policy and strategy documents (Amharic version).
- Ministry of Finance and Economic Development (2002): *Sustainable Development and Poverty Reduction Program, Federal Democratic Republic of Ethiopia*, Addis Ababa.
- Mulat Demeke, Kelly V., Jayne T.S., Ali Said, Le Vallée J.C., and Chen H. (1997). Agricultural Market Performance and Determinants of Fertilizer Use in Ethiopia.
- Mulat Demeke, Fantu Guta & Tadele Ferede (2004). Agricultural Development in Ethiopia: *Are there Alternatives to Food Aid?* : Department of economics Addis Ababa University, Addis Ababa.
- Ohio State University Extension’s web site “Ohioline” at: <http://ohioline.osu.edu>
- Proclamation No. 147/1998 (1998). Cooperative Societies Proclamation Federal Negarit Gazeta (Amharic version) Addis Ababa.
- Sharp, K., Ludi E. (2007). Commercialization in Ethiopia: *Which Pathways?* Ethiopian Economics Association Annual Conference, Overseas Development Institute.

- Tesfaye Assefa (2004). Revitalizing Market-Oriented Agricultural Cooperatives in Ethiopia:
A Case Study Conducted In Cooperation with USAID's Cooperative Development Program.
- Torgerson, R. (2002). Agricultural Cooperatives in the 21st Century: United States Department of Agriculture, Rural Business– Cooperative Service Cooperative Information Report.
- Tschirley, D., Diskin, P., Daniel Molla & Clay D. (1995). Improving Information and Performance in Grain Marketing: An assessment of current market information systems, and recommendations. Food security research project Ministry of Economic Development and Cooperation, Addis Ababa, Ethiopia.
- USAID (2000). Amhara National Regional State Food Security Research assessment report Prepared by collaborative research support programs team.
- USAID (1985). Cooperative Development Policy Paper Cooperatives: Development Bureau for Program and Policy coordination, Washington, D.C.
- Veerakumaran, G. (2005). Role of Cooperatives in Promoting Democratic Culture in the Tigray Region Mekelle University. Presented by Mondragon University. The Mondragon Co-operative Research Conference.
- Zeuli, K., and Cropp R. (1980). Cooperative principles and practices in the 21th century.

APPENDICES

Appendix-1

Table 1: Type of primary cooperatives, their members and capital in Ethiopia (2009)

Ro.No	Types of cooperatives	No. of coops.	Members			Capital (Birr)
			Male	Female	Total	
1.	Multipurpose cooperatives	6725	3894230	500618	4394848	407,041,603
2.	Cattle fattening coops	217	15935	2487	18422	4981895
3.	Milk produces and marketing coops	189	5913	1926	7839	4305801
4.	SACCOs	6413	280869	227948	508817	324835045
5.	Consumers coops	438	24054	12275	36229	15309716
6.	Mining coops	1186	56960	3350	60810	12080822
7.	Rural electrification coops	98	14926	2096	17022	2859756
8.	Handicrafts coops	742	10387	4875	15327	5836453
9.	Irrigation coops	950	52,457	12,722	65,179	25,009,514
10.	Housing coops	4,068	34,168	13,943	48111	46,594,860
11.	Fishery coops	58	3,346	87	3433	3,737,574
12.	Honey and honey products marketing coops	55	7,353	399	7752	1,265,613
13.	Incense and gums coops	17	1,972	105	2077	3,080,477
14.	Construction coops	1139	4,165	519	4684	1,952,944
15.	Salt product marketing coops	25	682	91	773	108,750
16.	Natural resource and tourism coops	10	306	116	422	498,246
17.	Forestry coops	122	11,551	1,326	12877	11,409,099
18.	Service cooperatives	154	2,016	1,418	3434	7,199,409
19.	Education and training coops	5	218	71	289	257,373
20.	Youth coops primary coops	4	76	108	184	30,328
21.	Urban farming coops	97	78	26	104	30,404
22.	Tailors coops	12	175	36	211	3,8261
23.	Live stock marketing coops	730	18,241	7,590	25831	9,180,397
24.	Small and medium trading coops	2104	914	619	1533	25,259,949
25.	Coffee producers coops	51	2493	236	2729	1,576,354
26.	Butchery coops	12	350	11	361	894,755
27.	Chat marketing coops	47	5,578	302	5880	527,108
28.	Vegetables and fruits coops	86	5,901	595	6496	1,130,600

29.	Crop production coops	130	6,644	2,428	9072	5525336
30.	Grain Seeds production and marketing coops	28	2,144	143	2287	1,824,424
31.	Sugar cane producers coops	12	1,398	492	1890	1,954,083
32.	Electrician coops	6	226	36	265	437,322
33.	Cultural drugs coops	4	228	30	258	16,699
34.	Honey marketing coops	19	398	19	417	229,418
35.	Others	175	3,729	1,440	5169	7,850,272
Total		26,128	4,470,081	800,127	5,270,208	1,003,470,660

Source: Cooperative Magazine FCA, June/ 2009.

Appendix _2: Cooperative union and regional distribution in Ethiopia (2009)

Ro. No	Types of unions	No. of coops	Regional distribution of cooperative unions								Capital
			Oromia	Amhara	SNNP	Tigray	Addis Ababa	Be/Gum.	Dire dawa	Affiliate member	
1	Multipurpose coops	69	18	25	-	23	-	2	1	1,451	57,014,620
2	Dairy coops	4	2	2	-		-	-	-	29	1,103,557
3	Honey products coops	2	-	1	1		-	-	-	14	332,918
4	SACCOs	39	10	14	11	1	2	1	-	978	21,553,563
5	Dry food preparation	1	-	-	-	-	1	-	-	22	19,500
6	Grain marketing	36	13	-	13	-	-	-	-	771	45,947,670
7	Coffee	6	1	-	5	-	-	-	-	227	27,973,524
8	Forestry	2	2	-	-	-	-	-	-	12	110,840
9	Cattle marketing	3	2	-	1	-	-	-	-	23	241,817
10	Sugar cane producers	1	1	-	-	-	-	-	-	7	306,4682
11	Mining	3	3	-	-	-	-	-	-	119	1,634,535
12	Vegetables and fruits	5	4	-	1	-	-	-	-	53	2,971,370
Total		171	66	42	32	24	3	13	1	3,706	161,968,596

Source: FCA cooperatives magazine, 2009.

Appendix_3: production of teff and wheat by sample farmers 2008/09

Crop type	Area covered (Hr)	Production (Qt)	Value (Birr)	Production Percentage
Teff	77	895	691,973	32.21
Wheat	57	1,883	805,917	67.78
sum	134	2778	1497890	100.00
minimum	0			
maximum	60			
mean	18.518			
Std.Deviation	11.067			
T-value(1.320),				

Source: Computed from survey data

Appendix_4: Distribution of Farmers by Quantity of teff and wheat sold through MPCs

Quantity sold	Frequency	Percent	Valid Percent
0.00	88	58.7	58.7
0.01-1.00	18	12.0	12.0
1.01-2.00	15	10.0	10.0
2.01-3.00	12	8.0	8.0
3.01-4.00	6	4.0	4.0
4.01-5.00	7	4.7	4.7
5.01-6.00	4	2.7	2.7
Total	150	100.0	100.0
Mean	1.11		
Maximum	6		
Minimum	0		
Std.Deviation	1.669		
sum	167		

Source: survey data, 2010

Appendix 5: Grain marketing participant multipurpose cooperatives in Gozamn Woreda (2007-09)

Ro.No	Name of cooperative s	Members			Participation in grain marketing	
		Male	Female	Total	2007	2008
	Argena	764	102	866	x	✓
	Chertekel	2297	52	2349	x	✓
	Dilenta	2369	79	2448	x	✓
	Fendika	3079	183	3262	✓	✓
	Libanos	1177	91	1268	x	✓
	Maiangetam	1244	65	1309	x	✓
	Wugir	1412	74	1486	x	✓
	Ybokla	1269	64	1333	x	✓
	Yefuacha	1180	39	1219	✓	✓
	Total	14,791	749	15,540		

Note: x- Represents the MPCs not participated in grain marketing in the given years.

✓ - Represents the MPCs participated in grain marketing in the given years

Appendix_ 6: Correlations test for continuous explanatory variable

		Quantity sold through MPCs	purchase price of coops	Age of respondents	family size	duration of membership	oxen ownership	access to fertilizer	patronage refund	distance cooperative	size of land holdings	Level of education	access to information	participation	farming year
Quantity sold through MPCs	Pearson Correlation Sig. (2-tailed)														
purchase price of coops	Pearson Correlation Sig. (2-tailed)	.631** .000													
Age of respondents	Pearson Correlation Sig. (2-tailed)	.024 .772	-.045 .588												
family size	Pearson Correlation Sig. (2-tailed)	-.141 .086	-.111 .174	.077 .350											
duration of membership	Pearson Correlation Sig. (2-tailed)	.006 .946	-.009 .917	.785** .000	.266** .001										
oxen ownership	Pearson Correlation Sig. (2-tailed)	.079 .337	-.006 .946	.076 .358	.130 .112	.178* .029									
access to fertilizer	Pearson Correlation Sig. (2-tailed)	.303** .000	.167* .041	-.021 .799	-.070 .393	-.061 .459	.041 .619								
patronage refund	Pearson Correlation Sig. (2-tailed)	.424** .000	.207* .011	.076 .358	-.035 .671	.029 .729	.183* .025	.293** .000							
distance of the MPCs	Pearson Correlation Sig. (2-tailed)	-.017 .832	.151 .066	.053 .517	.126 .126	.063 .441	.133 .104	-.077 .346	.200* .014						
Level of education	Pearson Correlation Sig. (2-tailed)	-.113 .169	-.029 .726	-.086 .294	.198* .015	-.028 .735	.051 .532	-.014 .863	.004 .957	.006 .943	.141 .085				
access to information	Pearson Correlation Sig. (2-tailed)	.377** .000	.343* .000	.042 .610	-.070 .392	.042 .613	.090 .275	.122 .136	.172* .035	.070 .398	.055 .506	.108 .188			
participation	Pearson Correlation Sig. (2-tailed)	-.113 .169	-.047 .566	.002 .983	.129 .116	.072 .381	.149 .070	-.142 .083	-.127 .122	.138 .093	.049 .555	.014 .865	.072 .380		
farming year	Pearson Correlation Sig. (2-tailed)	.189* .020	-.014 .867	.040 .623	.043 .603	.046 .580	.056 .494	.078 .344	.211* .010	.118 .151	- .292	- .991	- .840	.049 .548	

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Source: computed from the surveyed data

Appendix 7: correlation tests of dummy explanatory variables

		Quantity sold through MPCs	corruption	purchase period	access to credit	weather condition	storage capacity	access to training	Qualified employees
Quantity sold through MPCs	Pearson Correlation								
	Sig. (2-tailed)								
corruption	Pearson Correlation	-.044							
	Sig. (2-tailed)	.592							
purchase period	Pearson Correlation	.249**	-.041						
	Sig. (2-tailed)	.002	.616						
access to credit	Pearson Correlation	.018	.019	-.011					
	Sig. (2-tailed)	.825	.816	.890					
weather condition	Pearson Correlation	-.219**	-.051	-.423**	.029				
	Sig. (2-tailed)	.007	.537	.000	.722				
storage capacity	Pearson Correlation	-.177*	.001	-.154	-.085	.179*			
	Sig. (2-tailed)	.031	.990	.060	.303	.028			
access to training	Pearson Correlation	.040	.098	-.065	-.068	.074	.176*		
	Sig. (2-tailed)	.629	.232	.431	.408	.366	.031		
Qualified employees	Pearson Correlation	-.178*	.047	-.111	.117	.266**	-.213**	.055	
	Sig. (2-tailed)	.029	.568	.178	.153	.001	.009	.506	

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Source: computed from the surveyed data

Appendix _8: Interview schedule

Mekelle University

College of Business and Economics

Department of Cooperatives studies (Cooperatives Marketing)

This interview schedule is prepared to collect data from cooperatives member for the purpose of studying “**The role of multipurpose cooperatives in Marketing of teff and wheat in Gozamn woreda**” This interview schedule is used only for the academic purpose. Therefore, I will keep the information confidentially and will not be transferred to third party without prior consent of you. Thank you for your cooperation.

1. General information

1. Name of the enumerator _____ Signature _____
2. Date _____
3. Name of the woreda _____
4. Name of the cooperative _____
5. Distance of the cooperative from the woreda center (Km_s) _____
6. Name of the respondent/farmer _____ Kebele _____ Specific Name (Got) _____

2. Member's Information

- 2.1 Age _____ (years)
- 2.2. Sex. 1. Male 2. Female
- 2.3. Martial Status 1. Married 2. Single 3. Divorced 4. Widowed
- 2.4. Educational level 1. Illiterate 2. 1-4 grades 3. 5-8 grades 4. 8-10 grades
5. above 10th grades

2.5. Religion 1. Orthodox 2. Muslim 3. Protestant 4. Others/specify_____

2.6. When did you start farming your own? For _____ Years

2.7. Household Membership

S/No	Full Name	Relation to the HH head	Sex		Age	Main occupation	Educational Level
			Male	Female			
1							
2							
3							
4							
5							

Note: A. Relation to the HH head means 1. Son /Daughter 2.Wife/Husband 3.Parent

4. Relative 5.Employee 6.Others /Specify/_____

B. Main Occupation means 1. Farming 2.Animal rearing 3.House work

4. Student 5. Others /Specify/_____

C. Educational Level means 1. Illiterate 2. 1-4 grades 3. 5-8 grades 4. 8-10 grades

5. above 10th grades

2.8. Did the household involve in any off/non-farm activities in 2000/2001 Ethiopian production year? 1. Yes 2. No

➤ If yes to 2.8, in what type of activity?

1. Petty trade (poultry & egg, milk & milk products, hides & skins, honey)

2. Handicraft 3. Others /Specify/_____

2.9. How long have you been the member of this cooperative? (Duration of membership)

For _____ Years

2.10. Did you have position/responsibility / in the cooperative in last five years? 1. Yes 2. No

➤ If yes to 2.10, what was your position?

1. Management Committee

2. Control Committee

3. Purchase and sale committee

4. Others/ specify _____

3. Farm Characteristics of the Member Farmer

3.1. Land

3.1.1. How much is your *farm size* in hectares (own land)?

Wet (Irrigated) land ____ Ha, Dry land _____ Ha, Total farm size _____ Ha

Major Crops produced by the house hold in Meher, 2001 E.C

S/No	Types of Crop	Area (Ha)	Amount produced (Qts)	Value (Birr)	purpose
1	Cereals				
1.1.	Maize				
1.2	Sorghum				
1.3	Teff				
1.4	Wheat				
1.5	Finger Millet				
1.6	Barely				
1.7	Others/specify/				
2	Oil seeds				
2.1	Niger(Noug) seed				
2.2	Rape seed				
2.3	Others/specify				
3	pulses				
3.1	Field bean				
3.2	Field pea				
3.3	Chick pea				
3.4	Others/specify/				
4	Fruits and vegetables				
4.1	Produced in Autumn/Meher/				
4.2	Produced through Irrigation				

* Purposes: 1. marketed 2. Consumption 3.Seed 4. Stored as reserve

5. Others, specify _____

3.2. How did you allocate the annual grain produces among different needs of the family?

3.2.1 Family Food consumption _____qt _____birr

3.2.2. Cultural ceremonies _____qt _____birr

3.2.3. Next year seed demands _____qt _____birr

3.2.4. Marketed _____qt _____birr

3.2.5. Reserve _____qt _____birr

3.2.6. Others _____qt _____birr

Livestock ownership in 2001 E.C

S/No	Types of Livestock and Livestock Products	Number	Value of each (Birr)	Purpose of Keeping *
1	Types of Livestock			
1.1	Oxen			
1.2	Cows			
1.3	Calves			
1.4	Heifers			
1.5	Sheep			
1.6	Goat			
1.7	Mule			
1.8	Donkey			
1.9	Horse			
1.10	poultry			
1.11	Bee colony			
1.12	Others/ Specify/			
2	Live stock products	Amount	Value of each (Birr)	Purpose *
2.1	Milk and milk products			
2.2	Honey and wax			
2.3	Hides and skins			
2.4	Egg			
2.5	Others/ Specify/			

* Purpose of keeping 1. Milk production 2. Consumption 3. Draft power 4. Sale

5. Others/ specify _____

Other sources of income in 2001 Ethiopian production year

S/No	Sources of income	Value (Birr)
1	Wood, Crop residue and the like	
2	Off-farm income	
3	Others/ Specify/	

3.4. How conducive was the ***weather condition*** of 2001 E.C production year for grain production?

1. Favorable 2. Medium 3. Unfavorable

4. Business Activities of Cooperatives and Members participation

4.1. Selling and purchasing activities of wheat and teff

4.1.1. Have you sold ***teff*** and ***wheat*** in 2001 Ethiopian production year?

1. Yes 2. No

➤ If yes to 4.1.1, to whom, how much quantity and by what price have you sold?

To the Cooperative:

1. Teff _____ quintal, one quintal average price _____ Birr

2. Wheat _____ quintal, one quintal average price _____ Birr

To local assemblers:

1. Teff _____ quintal, one quintal average price _____ Birr

2. Wheat _____ quintal, one quintal average price _____ Birr

To retailers:

1. Teff _____ quintal, one quintal average price _____ Birr

2. Wheat _____ quintal, one quintal average price _____ Birr

To consumers

1. Teff _____ quintal, one quintal average price _____ Birr
2. Wheat _____ quintal, one quintal average price _____ Birr

To wholesalers:

1. Teff _____ quintal, one quintal average price _____ Birr
2. Wheat _____ quintal, one quintal average price _____ Birr

To Ethiopian Grain Enterprise:

1. Teff _____ quintal, one quintal average price _____ Birr
2. Wheat _____ quintal, one quintal average price _____ Birr

Others/ specify:

1. Teff _____ quintal, one quintal average price _____ Birr
2. Wheat _____ quintal, one quintal average price _____ Birr

4.2. Which of the following do you think are important characteristics of cooperative grain marketing?

1. Genuinely measures (no cheating in the weight) 2. Better price
3. Proximity (nearness) 4. It has patronage refund
5. Others/ specify _____

4.3. If you sold grains to other marketing agents, **where** could (did) you get them?

1. at the farm level 2. At local market 3. At woreda (main) market
4. Others/specify _____

4.4. Why you sold your teff and wheat to other marketing agents?

1. The location of the cooperative store is far away from my residence
2. The cooperative hasn't sufficient storage capacity to purchase my grain.
3. The cooperative was not ready to purchase
4. Lack of coincidence the day you sold and the purchasing day of the coops did not fit

5. Price difference/the cooperative didn't pay competitive price

6. due to undue weight deduction by the cooperative purchaser

7. Others/ specify_____

4.5. Did you know the price for a quintal of teff and wheat in the nearby market?

1. Yes 2. No

➤ If yes to 4.5, which price was better?

1. The cooperative price 2. The nearby market price 3. They are the same

4. Others/ specify_____

4.6. Do you think that the cooperatives, you belonged are well organized by qualified employees?

➤ If yes to 4.6, which staff is well organized and equipped by qualified employees?

1. The purchasing staff 2. The accounting staff 3. The managerial staff

4. Others specify_____

5. Supply of Farm Inputs

5.1. Did you use **farm inputs** in 2001 E.C? 1. Yes 2. No

5.1.1. If yes to 5.1, what type of farm inputs, you have used?

1. Fertilizer

1.1. DAP_____qt_____birr

1.2. UREA_____qt_____birr

2. Improved seed

2.1. Teff_____qt_____birr

2.2. Wheat_____qt_____birr

2.3. Maize_____qt_____birr

2.4. Others specify_____

3. Others/specify/ _____

5.1.2. If yes to 5. 1, from where you got farm inputs?

5.1.2.1. **Fertilizer:**

1. Cooperative 2. AISCO 3. Ambasel trading house 4. Ethiopian Seed
Enterprise 5. Retailers 6.Others/ specify_____

5.1.2.2. Improved seed:

1. Cooperative 2. AISCO 3. Ambasel trading house 4. Retailers
5. Others/ specify_____

5.1.3. What was/ were the possible reason (s) for buying inputs from the cooperative?

1. Provide it on credit 2. No other sources provide in sufficient amount
3. Relatively lower price 4. Others/ specify _____

6. Credit Services

6.1. Did you get credit from the cooperative in 2001 E.C?

1. Yes 2. No

➤ If yes to 6. 1, for what purpose did you get credit?

1. Fertilizer 2. Improved seed 3. Animal package 4. Farm implements
5. Others/ specify_____

6.2. Did you agree on the credit cut made by the government in 2001 EC?

1. Yes 2. No

7. Distances from the Member's Residence to the Respective cooperative and Agents

7.1. How many hours you need to travel to get the following agents on foot for a single trip?

7.1.1. Cooperative _____ hours

7.1.2. Local market (if there is) _____ hours

7.1.3. Local assemblers (if there is) _____ hours

7.1.4. The woreda (main) market _____ hours

7.2. By what means you usually take your produces when you sell?

1. carrying by own 2. Using donkey /other animals/ 3. Using carts

4. Using trucks 5. Others/ specify _____

5. Surplus/profit from the Cooperatives Business

7.3. Have you heard about the cooperative you belonged obtained surplus from business transactions in the past two years?

1. Yes 2. No

➤ If yes to 7.3, did you get money as patronage refund from the cooperative?

1. Yes 2. No

➤ If yes to 7.3, how much it was? _____ Birr

7.4. If No to 7.3, do you know the possible reasons?

1. I didn't sell my products to the coop. 2. The general meeting decided to be reinvested in the Coop's. 3. The cooperative did not get surplus

4. The cooperative didn't purchase farm products 5. Others/ specify _____

7.5. Do you know, if you sell your produces to cooperatives or buy inputs from the cooperative; you will get money as patronage refund/ dividend?

1. Yes 2. No

8. Market Information and Extension services

8.1. Did you get and follow market information? 1. Yes 2. No

8.2. If yes to 8.1, from whom you get?

1. Cooperative 2. DA 3. Radio 4. Peasant Associations 5. Governmental offices
6. Speaking with other farmers 7. Speaking with traders/regular customers
8. Others (specify) _____

8.3. Did you have your own Radio in 2001 E.C? 1. Yes 2. No

8.4. Is (are) there cooperative extension DAs in your Kebele /nearby area? 1. Yes 2. No

8.5. If yes to 6.4, do have contact with DA/s? 1. Yes 2. No

8.6. If yes to 6.4, how many times have you contacted him or her /them in 2001 E.C? ____times

8.7. If you have contacted with DA/s, what services did he/they provide you?

1. About the Role and benefits of coops 2. About cooperative grain purchasing activities
3. Credit utilization and repayment 4. Others/specify_____

If No to 8.7, what was your possible reason (s)?

1. No need of contacting him/them 2. He/ They is/are far from my residence
3. Others /specify_____

9. Members Participation in Cooperatives Meeting

9.1. Have you participated in cooperative meeting in 2001 E.C?

1. Yes 2. No

9.2. If yes to 9.1, how many times did you participate? For _____ times.

9.3. What issues were raised during the meeting?

1. Approval of annual plan 2. Listening of audit report
3. Election of different committees 4. Distribution of net profit/surplus
5. Others/specify_____

If No to 9.1, why?

1. I don't have interest 2. I didn't know the presence of meeting
3. Due to personal problem 4. Others/specify _____

10. Other Benefits of the Multipurpose Cooperative

10.1. Did you get other services besides distributing inputs, purchasing your grains and providing credit in last year? 1. Yes 2.No

➤ If yes to 10.1, which services did you get?

1. Transportation services 2. Storage services 3. Grain mill service 3.Tractor plough service
4. Employment opportunity 5. Consumer goods supply

6. Others/ specify _____

10.2. What more services you require from your cooperative?

11. Cooperatives Education/ Training

11.1. Did you get education/ training from the Cooperative in past two years? 1. Yes 2. No

11.2. If Yes to 9.1, on what points it has given you education/ training?

1. The benefits of the cooperative 2. The need of the members' participation to the cooperative 3.The principles of the Cooperative s
4. Others/specify _____

11.3. Did you get any training or education about the cooperative from any other institution(s) other than your primary cooperative?

1. Yes 2. No

If yes to 11.3, which institution(s) gave you that education/ training?

1. The woreda cooperative promoters and organizers 2. The cooperative union
3. Non Government Organizations 4. Others/ specify_____

12. Other Issues on the Long-Term Success of the Cooperative

12.1. Did you believe that the cooperative is doing a good job in solving the problems in which the farmers are facing these days? 1. Yes 2. No

- If No to 12.1, what is/are the major problem that isn't/aren't solved by the Cooperative in your area?

1. Household consumable items (such as salt, soap, oil, cloths, etc) 2. The farm inputs are not provided in sufficient amount 3. The credit demand
4. Farm implements 5. Others/ specify_____

12.2. In general, do you believe that the farmers will overcome their commonly felt problems by working together such as establishing and strengthening cooperative in the future?

1. Yes 2. No

- If No to 12.2, what is/ are the possible reasons?

1. Lack of responsibility for common work
2. Misuse of the cooperative by some individuals 3. Lack of commitment by the members
4. Political influence/ intervention 5. Others specify_____

12.3. Do you want to continue your membership of the cooperative? 1. Yes 2.No

- If Yes to 12.3, what is/are the possible reason(s)?

1. It supplies farm inputs 2. It purchases (assures a market for) my products
3. I get consumer goods 4. I don't want to isolate from other farmers

5. There is external pressure 6. Others/ specify_____

12.4. Is there misappropriation/corruption of cooperative's property? 1. Yes 2. No

If yes to 12.4, who misuses cooperative's property?

1. Management committee 2. Purchase and sales committee 3. Store keepers

4. Shop keepers 5. Employees 6. Others/specify_____

➤ If yes to 12.4, what is/are the reason(s) for misappropriation?

1. Lack of trust/personal use 2. Lack of proper internal control system

3. Lack of skilled manpower 4. Others/specify_____

12.5. What were the major problems in cooperative grain marketing activities?

1. Lack of road/transport 2. Lack of storage facilities 3. Lack of capital

4. Poor marketing management 5. High transport cost

6. Lack of market information

7.Others(specify)

1 _____

2 _____

3 _____

4 _____

5 _____

12.6 What are your suggestions for the improvement of the grain marketing role and performance of multipurpose cooperative? Respond on the parameters/ indicators /listed below and rank them accordingly.

S/No	Parameters(Indicators)	Very Important (3)		Important (2)		Less Important (1)	
		<i>Response</i>	<i>Rank</i>	<i>Response</i>	<i>Rank</i>	<i>Response</i>	<i>Rank</i>
1	Setting of periodical and better purchase price for a quintal of grains						
2	Suitable purchase period and time schedule						
3	Assign full time qualified purchasers in the main grain harvest seasons						
4	Develop members awareness about the advantages of grain marketing through MPCs						
5	Create strong grain marketing integration of MPCs and Gozamn union						
6	Provide Up-to-date Market information to members						
7	The need to all weather Road and transport facility						
8	Periodical distribution of patronage refund						
9	Protect undue weight deduction during purchase of grain by MPCs purchasers						

Thank You

Appendix _9

Focus Groups Discussion to evaluate the role of MPCs in teff and wheat marketing in
Gozamn Woreda

Focus group discussion questions(checklist)

What are the grain marketing roles of MPCs this woreda?

1.1. Roles of MPCs

2.1.1. _____

2.1.2. _____

2.1.3. _____

2.1.4. _____

2.1.5. _____

2.1.6. _____

1.2. What are the activities of MPCs related to grain marketing?

1.2.1. _____

1.2.2. _____

1.2.3. _____

1.2.4. _____

1.3. What are the main problems of cooperative in teff and wheat marketing?

1.3.1. _____

1.3.2. _____

1.3.3. _____

1.3.4. _____

1.3.5. _____

1.4. What would be the possible solutions to improve teff and wheat marketing through
MPCs?

1.4.1. _____

1.4.2. _____

1.4.3. _____

1.4.4. _____

1.4.5. _____

1.5. Other suggestions _____

Thank You

APPENDIX_10

FIVE-YEAR PLAN OF THE FEDERAL COOPERATIVE AGENCY (2005/06-2009/10)

Source: Federal Cooperative Agency (2006)

1. Making 70 percent of the society user of the cooperatives' services
2. Increasing the cooperatives' input marketing coverage from its present level of 70 percent to 90 percent
3. Increasing the cooperatives' output marketing coverage from its present level of 10 percent to 60 percent
4. Increasing the number of primary cooperatives from its present level of 14,423 to 24, 677
5. Increasing the cooperative Unions from its present level of 105 to 646??
6. Establish 6 cooperative Federations (crop, coffee, saving & credit, milk & milk products, mining, and fruits and vegetables)
7. Establish one Cooperative league
8. Give professional support in the establishment of 3 other cooperative banks in regions. By so doing, increasing the number of regional cooperatives' banks from its present level of 1 to 4. Also establish one national cooperative bank to solve the financial shortage of cooperatives and their members
9. Through organizing 420 rural electrification service cooperatives, enabling 1,260,000 households or 6.3 million rural populations to get electric power
10. Through organizing 20 telecommunications cooperatives, enabling the rural population to get access to market information
11. Through organizing and strengthening cooperatives in pastoralist and semi-pastoralist areas based on their resources, provide professional support in getting right price for their produce as well as providing consumable goods and inputs with a reasonable price
12. Increasing women membership from its present level of 13 percent to 30 percent

13. Increasing the current low level of youth membership to 25 percent
14. Increasing the employment created by cooperatives from its current level of 7000 to 126,000
15. In training programs organized by the Federal Cooperative Agency, issues concerning HIV/AIDS will get coverage of 30 minutes up to one hour in the session. Support will also be made to newly established cooperatives to give trainings on HIV/AIDS to their members. The would be organized unions will allocate 0.5-1 percent of their social fund to their HIV affected members
16. Increasing the current level of 630 million Birr saving to 1.2 billion Birr through organizing saving and credit cooperatives both in urban and rural areas and build the saving and investment capacity of the society
17. Helping cooperatives get 13 billion Birr credit so that they raise their productivity and production, enable them provide agro-processing service and making member get better benefit from their produce
18. To enhance the execution and implementation capacity through the program of “building the capacity of cooperatives”: give capacity development training to 50186 employees and 3767 professionals. Also train 7763 and 4000 employees at diploma and degree level respectively. In addition to this, on-job training will be given for 2195 professionals, 20082 cooperative management bodies and 322 cooperative employees. 120 professionals will get M.Sc degree training and 10 will get PhD training in cooperatives through RUFIP program
19. Achieving better implementation of plans through undertaking experience sharing and consultative conference between the Agency and regions once in six months
20. Ensuring the continuity of information provision in the cooperative sector through facilitating cooperatives to have radio program transmission ownership

APPENDIX _11

Focus Group discussion by Multipurpose cooperative leaders(January,2010)



Source: own survey data